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Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics
Düsternbrooker Weg 120
24105 Kiel (Germany)
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)
<https://www.zbw.eu/>

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6 ADB Avenue, Mandaluyong City, 1550 Metro Manila, Philippines
Tel +63 2 632 4444; Fax +63 2 636 2444
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FOREWORD

We are pleased to present the second edition of the *Public–Private Partnership Monitor (PPP Monitor)*. This edition covers a total 12 developing member countries (DMCs) of the Asian Development Bank (ADB)—with the addition of Georgia, Pakistan, and Sri Lanka—and provides updates for 2017. The first edition covered public–private partnerships (PPPs) in the following countries: Bangladesh, India, Indonesia, Kazakhstan, Papua New Guinea, the People’s Republic of China, the Philippines, Thailand, and Viet Nam.

In 2017, ADB estimated that Asia and the Pacific must spend \$1.7 trillion a year on infrastructure until 2030 to maintain growth, meet social needs, and respond to climate change, and that an annual infrastructure gap of \$204 billion would need private sector investment.¹ ADB has responded to this need through loans and technical assistance. From 2014 to 2018, the bank approved 317 loans and technical assistance projects with PPP components. As of December 2018, ADB was mandated to provide transaction advisory on 12 projects and supported 23 applications for private sector participation in infrastructure through the Asia Pacific Project Preparation Facility (AP3F). In 2018, AP3F worked with 16 DMCs with total approved funding of \$16.2 million that supported various infrastructure investments. In terms of capacity building, AP3F continues to work with 15 countries to enhance their capacities to undertake PPP arrangements through advisory services, training, and sector-based workshops.

The *PPP Monitor* presents information on the current status of the PPP environment in specific ADB DMCs, with the main objective of providing business intelligence to the private sector on the PPP market readiness. It assesses about 200 quantitative and qualitative indicators, divided into four main categories: regulatory framework, institutional capacity for implementation, PPP market maturity, and financial facilities. The *PPP Monitor* aims to act as a policy tool to create a dialogue between the public and private sectors of countries and provide an enabling environment for their respective PPPs.

The report provides detailed information on the country, the sector, and the regulatory agencies; it also presents challenges; it also presents challenges on establishing and progress on PPP units and PPP projects. In 2017, 110 PPP projects with a total investment value of \$31 billion reached financial close—59% (65 projects) were in the renewable energy or renewables sector, 14% in the road sector, 11% in the water sector, and the rest constituted other sectors. Among the 12 DMCs, Bangladesh, India, and the People’s Republic of China had the highest number of projects closed.

¹ Asian Development Bank. 2017. *Meeting Asia’s Infrastructure Needs*. Manila.

Overall, the PPP environment in the majority of DMCs is at the developing stage—the Philippines is at a mature stage and Papua New Guinea at an emerging stage. It is evident that continuous regulatory and institutional reforms are required to attract private sector investments and generate a pipeline of bankable PPP projects. DMCs should implement PPP-related reforms by enacting PPP laws, streamlining the PPP procurement and bidding process, introducing a dispute resolution mechanism, and establishing PPP units. We will continue to provide DMCs with advisory solutions to better address these challenges and transaction advisory services to develop more bankable PPP projects, will constant support for PPP-related activities.

The information contained herein were derive from consultations with leading technical and legal firms as well as financial institutions. We collaborated with private sector firms particularly Mott MacDonald, who conducted an intensive survey and coordinated with the 12 DMCs. However, it should be noted that the *PPP Monitor* reflects no official views of those firms and institutions.

We hope that you find the second edition of the *PPP Monitor* useful and that it will pave the way for a dialogue between the public and private sectors to foster more PPPs in our region.



Yoji Morishita

Head, Office of the Public–Private Partnership
Asian Development Bank

EXECUTIVE SUMMARY

About the PPP Monitor

The *Public–Private Partnership Monitor (PPP Monitor)* presents information on the current status of the public–private partnership (PPP) environment in 12 Asian Development Bank developing member countries (DMCs), with the main objective of providing business intelligence to the private sector on the PPP market readiness. Public sector stakeholders could also benefit from this information by using the *PPP Monitor* as a policy tool to create a dialogue regarding the enabling environment for PPPs in their respective countries.

This second edition of the *PPP Monitor* builds on the first edition, expanding the geographical coverage to three additional DMCs: Georgia, Pakistan, and Sri Lanka. The first edition covered Bangladesh, India, Indonesia, Kazakhstan, Papua New Guinea, the People’s Republic of China, the Philippines, Thailand, and Viet Nam.

The *PPP Monitor* assesses about 200 qualitative and quantitative indicators structured by topics and combined into four major categories: regulatory framework, institutional capacity for implementation, PPP market maturity, and financial facilities.

The key highlights are presented here.

Regulatory Framework

All 12 DMCs have dedicated legal instruments for established PPPs and allow the PPP procurement method to be used for nearly all infrastructure sectors. However, there are still some common regulatory deficiencies that inhibit the successful implementation of PPP projects, which include the following:

- (i) undeveloped or poorly regulated lender security rights, and treatment of termination and compensation events,
- (ii) limited government support measures such as project development funds, viability gap funding, state guarantees, and applicability of availability payment mechanisms beyond the utilities sector. Among the 12 DMCs, only Indonesia can offer a full package,
- (iii) insufficient guidance and regulation of the participation of state-owned enterprises,
- (iv) in general, lack of standardized, long-term PPP contract provisions, except in India, and
- (v) foreign ownership restrictions, which deter foreign investor participation and limit the competition and potential value for money. The most restrictive regimes are

currently in the Philippines, where the maximum threshold of foreign equity in a greenfield asset is set at 40% in all sectors; and in Thailand, where for the majority of infrastructure sectors, foreign ownership cannot exceed 49%. Bangladesh, Georgia, and Pakistan are the most open economies, allowing 100% of foreign ownership in all types of infrastructure assets.

Delays associated with the land acquisition process and resettlement issues have been one of the major impediments in many DMCs, and often resulted in PPP projects being stalled. This is particularly applicable to linear infrastructure sectors such as land transportation, water pipeline, and electricity transmission. While the best practice is to make the land available before the start of construction, in practice this often could not be achieved.

Overall, the status of PPP regulatory frameworks in the majority of DMCs can be defined as developing, with the exception of Papua New Guinea (PNG), where it is just emerging. Nevertheless, DMCs are continuously making steps to improve their regulatory frameworks by fine-tuning the existing regulations and introducing supporting ones: 5 of the 12 DMCs (Bangladesh, Georgia, Pakistan, the Philippines, and Thailand) have reported progress in the regulatory environment in 2017, compared to 2016. Notable improvements included the introduction of a Draft PPP Law in Georgia that is intended to come into effect in 2018, and passage of the PPP Authority Bill by the National Assembly in Pakistan, aiming to provide a regulatory and enabling environment for PPPs on a national level.

Institutional Capacity for Implementation

The capacity of the public sector to plan, prepare, and procure PPP projects is inconsistent in all DMCs. Only Bangladesh and the Philippines demonstrate an advanced level. Apart from Georgia and PNG, the rest of the DMCs have a specialized PPP-promoting government agency setup, and 8 of the 12 DMCs have published pipelines of potential PPP projects. However, often there is little or no methodology behind the development of these pipelines, and generally, there is limited understanding of PPP project selection and prioritization among the public sector. Overall, only five DMCs apply any screening methodology to identify potential PPP projects.

In addition to the absence of a robust pipeline of bankable PPP projects in many DMCs, generally inadequate public sector resources are devoted to project preparation and tendering. The indicators suggest the PPP procurement is insufficiently regulated in 7 of the 12 DMCs. It is not a common practice among DMCs to appoint international advisors either (only 5 of the 12 DMCs follow such practice). Therefore, project false starts are not uncommon, and this can diminish investor confidence and interest. In many DMCs, there is also scope for standardized tender documentation to be prepared, which could reduce individual transaction costs.

Unbalanced risk allocation is another common problem faced by many DMCs, and only 5 of the 12 DMCs have developed detailed guidance on risk allocation matrices.

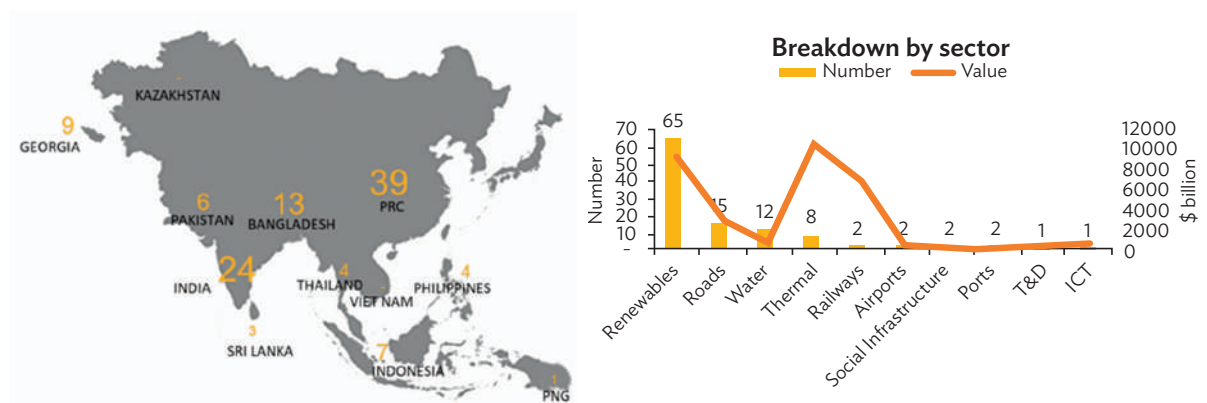
The slow development of institutional capacity has been exacerbated by a high turnover of public sector officials leading to loss of built-up institutional knowledge.

Nevertheless, in 2017, positive changes were introduced in 2 of the 12 DMCs. In Pakistan, the role of the PPP Authority was enhanced following the passage of the Federal PPP Act in 2017 with the aim to consolidate coordination, project planning and preparation, advisory, and gatekeeping functions. In Georgia, the Fiscal Risk Management Unit was established under the Ministry of Finance, with the function of controlling fiscal risk (including from conditional liabilities) arising from PPP projects.

PPP Market Maturity

In 2017, 110 PPP projects with a total investment value of \$31 billion reached financial close. Among those, 59% (65 projects) were in the renewable energy or renewables sector, followed by 14% in the road sector and 11% in the water sector, with the rest of the sectors constituting the minority. Among the 12 DMCs, the highest number of projects closed were in the People's Republic of China (PRC), India, and Bangladesh. There were no closed projects in Kazakhstan and Viet Nam in 2017. Refer to Figure A.

Figure A: PPP Projects Breakdown by Sector, 2017



ICT = information and communication technology, PNG = Papua New Guinea, PRC = People's Republic of China, T&D = transmission and distribution.

Source: Mott MacDonald.

Overall, energy has been the most successful sector, constituting just over 50% by number and by value of all PPP projects cumulatively across all 12 DMCs for the period 1990–2017. This is the sector where power purchase agreements are often standardized and the risk profile is established and accepted by all parties. Also, the energy sector, more often than other sectors, receives more government guarantees such as payment guarantees, tariff rate guarantees, and exchange rate guarantees. Renewable sector projects typically receive a larger share of government support compared with thermal generation projects, reflecting government drive for green energy.

Road PPPs in Asian markets are still at an early stage of development. This is partly because the private sector is concerned about key risks such as traffic and revenue risk, land acquisition issues, and environmental and social compliance requirements such as resettlement of displaced populations. Therefore, government support to address each of these risks, such as minimum revenue guarantees or availability payments, can be an important mitigation. However, among the 12 DMCs, only two (India and the PRC) have implemented availability payment road transactions, while only four (India, Indonesia, the PRC, and Viet Nam) have implemented road PPP projects with government issues traffic guarantees on early stages of operations.

There is an increasing interest in the public sector in social infrastructure PPPs. They often lack the constraints that PPPs face in many other sectors, such as land acquisition, environmental and social issues, and demand uncertainty, and have proved extremely successful in other parts of the world, representing relatively low risk to the private sector. While there have been few projects closed to date (social infrastructure projects constitute 0.5% of all PPP projects by number cumulatively across all 12 DMCs for the period 1990–2017), currently, social infrastructure is the third-largest sector in terms of number of planned PPP projects, and key enablers in the regulatory framework are in place in the majority of the 12 DMCs.

Financial Facilities

PPP project finance loans in local currency are available in all 12 DMCs, while those in hard currency are available in 11 DMCs (all except for PNG). Hedging products, such as currency and interest rate swaps, are available in the majority of DMCs with certain limitations and with differing degrees of advancement. The most developed financial markets for PPP projects are in Thailand, the Philippines, and the PRC.

Conclusion

Overall, the status of the PPP environment in the majority of DMCs is considered to be at the “developing” level, with the exception of the Philippines, which is showing a “mature” level and PNG, which is at an “emerging” level. Nevertheless, in 2017, 6 of the 12 DMCs had made progress across one or more categories (Table A).

Table A: Status of PPP Projects, 1990–2017

	BAN	GEO	IND	INO	KAZ	PAK	PHI	PNG	PRC	SRI	THA	VIE
Regulatory Framework	▲	▲				▲	▲				▲	
Institutional Capacity for Implementation		▲				▲						
PPP Market Maturity	▲	▲	▲	▲		▲	▲	▲	▲	▲	▲	
Financial Facilities		▲					▲	▲			▲	
	BAN	GEO	IND	INO	KAZ	PAK	PHI	PNG	PRC	SRI	THA	VIE
Summary status												
Overall change in 2017 since 2016	▲	▲	▲	▲	none	▲	▲	▲	▲	▲	▲	none

Legend:

* Status for PPP Market Maturity:

	>100 PPP Projects reached FC over 1990-2017
	21-99 PPP Projects reached FC over 1990-2017
	<20 PPP Projects reached FC over 1990-2017

Status for overall PPP Environment:

	Mature
	Developing
	Emerging

BAN = Bangladesh, FC = financial close, GEO = Georgia, IND = India, INO = Indonesia, KAZ = Kazakhstan, PAK = Pakistan, PHI = Philippines, PNG = Papua New Guinea, PPP = public-private partnership, PRC = People's Republic of China, SRI = Sri Lanka, THA = Thailand, VIE = Viet Nam.

Note: Green arrow ▲ indicates progress in 2017 since 2016:

- Regulatory Framework, Institutional Capacity for Implementation, and Financial Facilities categories: if there has been a positive change reported in 2017 in a developing member country across one or several indicators.
- *PPP Market Maturity* category: if there have been PPP projects that reached financial close in 2017.
- *Overall Change*: if there has been a positive change reported in 2017 in a developing member country across one or several of four main categories above.

Source: Mott MacDonald.

DEFINITIONS

Term	Definition
Public-private partnership (PPP)	<p>Contractual arrangement between public (national, state, provincial, or local) and private entities through which the skills, assets, and/or financial resources of each of the public and private sectors are allocated in a complementary manner, thereby sharing the risks and rewards, to seek to provide optimal service delivery and good value to citizens. In a PPP, the public sector retains the ultimate responsibility for service delivery, although the private sector provides the service for an extended time.</p> <p>Within Asian Development Bank operations, all contracts such as performance-based contracts (management and service contracts), lease-operate-transfer, build-own-operate-transfer, design-build-finance-operate, variants, and concessions are considered as various forms of PPP.</p> <p>Excluded are</p> <ul style="list-style-type: none"> • contracts involving turnkey design and construction as part of public procurement (engineering, procurement, and construction contracts); • simple service contracts that are not linked to performance standards (those that are more aligned with outsourcing to private contractor staff to operate public assets); • construction contracts with extended warranties and/or maintenance provisions of, for example, up to 5 years post-completion (wherein performance risk-sharing is minimal as the assets are new and need only basic maintenance); and • all privatization and divestures.
Availability-/performance-based	Method of investment recovery in PPP projects, when payments to the private party are made by the contracting authority over the lifetime of a PPP contract in return for making infrastructure or services available for use at acceptable and contractually agreed performance standards.
Currency conversion swap fee	A premium which is paid by the borrower to settle on a swap in which the parties sell currencies to each other subject to an agreement to repurchase the same currency in the same amount, at the same exchange rate, and on a fixed date in the future.

Term	Definition
Direct agreement	An agreement normally made between the project company, the government contracting agency, and the lenders. The agreement usually gives the lenders step-in rights to take over the operation of the key PPP contracts.
Feed-in tariff (FIT)	A FIT is a policy mechanism designed to accelerate investment in renewable energy technologies, by offering long-term purchase agreements for the sale of renewable energy electricity.
Financial close	The event whereby (i) there is the existence of a legally binding commitment of equity holders and/or debt financiers to provide or mobilize funding for the full cost of the project and (ii) the conditions for funding have been met and the first tranche of funding is mobilized. If this information is not available, construction start date is used as an estimated financial closure date.
Financial equilibrium	The mechanism in a PPP agreement for dealing with changes, when changes in specified conditions and circumstances trigger compensating changes to the terms of the agreement. Some civil law jurisdictions emphasize economic or financial equilibrium provisions that entitle a partner to changes in the key financial terms of the contract to compensate for certain types of exogenous events that may otherwise impact returns. The partner is protected as the economic balance of the contract must be maintained and adequate compensation paid for damages suffered. Unexpected changes that merit financial equilibrium may arise from force majeure (major natural disasters or civil disturbances), government action, and unforeseen changes in economic conditions.
Government contracting agency	The ministry, department, or agency that enters into a PPP contract with the private sector and is responsible for ensuring that the relevant public assets or services are provided.
Government guarantee	<p>Agreements under which a government agrees to bear some or all risks of a PPP project. It is a secondary obligation which legally binds the government to take on an obligation if a specified event occurs. A government guarantee constitutes a contingent liability, for which there is uncertainty as to whether the government may be required to make payments, and, if so, how much and when it will be required to pay.</p> <p>In practice, government guarantees are used when debt providers are unwilling to lend to a private party in a PPP because of concerns over credit risk and potential loan losses. Government guarantees can also be used to benefit the equity investors in a PPP company when they require protection against the investment risks they bear.</p>

Term	Definition
Gross-cost contract	Type of PPP contract arrangement in the railway sector, under which all revenues (from fares and other sources) are transferred to the public authority, and the risks absorbed by the developer are confined to those associated with the cost of operations.
Independent power producer (IPP) scheme	<p>A scheme whereby a producer of electrical energy, which is not a public utility, makes electric energy available for sale to utilities or the general public.</p> <p>A scheme whereby a producer of electrical energy, which is a private entity, owns and/or operates facilities to generate electricity and then sells it to a utility, central government buyer, or end users. The IPP invests in generation technologies and recovers their cost from the sale of the electricity.</p>
Interest rate swap fee	A premium paid by the borrower for a hedging contract to convert a floating interest rate into a fixed rate. The two parties agree to exchange interest rate payments based on a notional principal amount, with typically one paying a fixed rate and the other generally paying a floating rate.
Lender's step-in rights	Lender's rights in project-financed arrangements to "step in" to the project company's position in the contract to take control of the infrastructure project where the project company is not performing.
Material adverse government action	An action by the government which directly and materially affects the private party of a PPP project in performing its obligations under the relevant PPP contract, and which would reasonably be expected to result in a material adverse effect.
Net-cost contract	Type of PPP contract arrangement in the railway sector, under which all revenues (from fares and other sources) are retained by the developer, and traffic and revenue risks are absorbed either fully or as per a contractually agreed portion.
Nonrecourse/limited recourse project financing	The financing of the development or exploitation of a right, natural resource, or other asset where the bulk of the financing is to be provided by way of debt, and is to be repaid principally out of the assets being financed and their revenues.
Project bond financing	An alternative source of financing infrastructure project by placing bonds.
Project development fund (PDF)	A fund dedicated to reimbursing the cost of feasibility studies, transaction advisers, and other costs of project development, to encourage contracting agencies to use high-quality transaction advisers and best practice. PDFs provide the specialized resources needed to conduct studies, to design and structure a PPP, and then to procure the PPP.

Term	Definition
Regulatory framework	A framework encompassing all laws, regulations, policies, binding guidelines or instructions, other legal texts of general application, judicial decisions, and administrative rulings governing or setting precedent in connection with PPPs. In this context, the term “policies” refers to other government-issued documents that are binding on all stakeholders, that are enforced in a manner similar to laws and regulations, and that provide detailed instructions for the implementation of PPPs.
Risk allocation matrix	Matrix indicating the allocation of the consequences of each risk to one of the parties in the PPP contract, or agreeing to deal with the risk through a specified mechanism which may involve sharing the risk.
Social infrastructure	Infrastructure that accommodates social services, including hospitals, schools and universities, prisons, housing, and courts.
State-owned enterprise (SOE)	A company or enterprise owned by the government or in which the government has a controlling stake.
Swiss challenge	A process in public procurement when a public authority which has received an unsolicited bid for a project publishes details of the bid and invites third parties to match or exceed it.
Unsolicited bid	A proposal made by a private party to undertake a PPP project. It is submitted at the initiative of the private party, rather than in response to a request from the government.
Viability gap funding	A scheme wherein the projects with low financial viability are given grants (or other financial support from the government) up to a stipulated percentage of the project cost, making them financially viable as PPPs.

ABBREVIATIONS

AAI	Airports Authority of India
ACV	Airports Corporation of Vietnam
ADB	Asian Development Bank
AEDB	Alternative Energy Development Board
ASA	authorized state agency
ASEAN	Association of Southeast Asian Nations
BAPPENAS	Badan Perencanaan dan Pembangunan Nasional (National Development Planning Agency)
BEM	Bangkok Expressway and Metro Public Company Limited
BIDA	Bangladesh Investment Development Authority
BII	Bureau of Infrastructure Investment
BLT	build–lease–transfer
BMA	Bangkok Metropolitan Authority
BOI	Board of Investment of Sri Lanka
BOO	build–operate–own
BOOT	build–own–operate–transfer
BOT	build–operate–transfer
BPDB	Bangladesh Power Development Board
BPJT	Badan Pengatur Jalan Tol (Toll Road Regulatory Agency)
BPNG	Bank of Papua New Guinea
BTO	build–transfer–operate
BTS	Bangkok Transit System
BTSC	Bangkok Mass Transit System Corporation
BVGL	business viability guarantee letter
CAREC	Central Asia Regional Economic Cooperation

CCEA	Cabinet Committee on Economic Affairs
CEA	Central Environmental Authority
CEB	Ceylon Electricity Board
CPC	Ceylon Petroleum Corporation
CPEC	China–Pakistan Economic Corridor
CSC	Ceylon Shipping Corporation
DEA	Department of Economic Affairs
DENR	Department of Environment and Natural Resources
DGCA	Directorate General of Civil Aviation
DOTr	Department of Transportation
DPWH	Department of Public Works and Highways
DRC	development and reform commission
EBRD	European Bank for Reconstruction and Development
ECA	export credit agency
ECB	external commercial borrowing
EGAT	Electricity Generating Authority of Thailand
EIA	environmental impact assessment
EIP	Electricity Industry Policy
EPA	energy purchase agreement
EPA	environmental protection act (Pakistan)
EPC	engineering procurement and construction
EVN	Vietnam Electricity
FDI	foreign direct investment
FIT	feed-in tariff
G2G	government to government
GCA	government contracting agency
GDP	gross domestic product
GOCC	government-owned and/or -controlled corporation
HAM	hybrid annuity model
HCMC	Ho Chi Minh City

HPP	hydroelectric power plant
ICC	Investment Coordination Committee
ICCC	Independent Consumer and Competition Commission
ICT	information and communication technology
IEE	initial environmental examination
IFI	international financing institution
IIGF	Indonesia Infrastructure Guarantee Fund
IPC	Indonesian port corporations
IPDF	Infrastructure Project Development Facility
IPFF	Investment Promotion and Financing Facility (Bangladesh)
IPFF	Infrastructure Project Finance Facility (Pakistan)
IPP	independent power producer
IRR	implementing rules and regulations
JICA	Japan International Cooperation Agency
JICT	Jakarta International Container Terminal
KEGOC	Kazakhstan Electricity Grid Operating Company
KPPIP	Komite Percepatan Penyediaan Infrastruktur Prioritas (Committee for Acceleration of Priority Infrastructure Delivery)
KTZ	Kazakhstan Temir Zholy (Kazakhstan State Railways)
LGU	local government unit
LRT	Light Rail Transit
MCA	model concession agreement
MEA	Metropolitan Electricity Authority
MIGA	Multilateral Investment Guarantee Agency
MOCA	Ministry of Civil Aviation
MOE	Ministry of Energy
MOEMR	Ministry of Energy and Mineral Resources
MOF	Ministry of Finance
MOIT	Ministry of Industry and Trade
MORTH	Ministry of Road Transport and Highway (India)

MOS	Ministry of Shipping (Bangladesh)
MOT	Ministry of Transport (Indonesia, Peoples Republic of China, Thailand and Viet Nam)
MOTC	Ministry of Transport and Communications (Thailand)
MOU	memorandum of understanding
MRT	mass rapid transit (Thailand)
MRT	Metro Rail Transit (Philippines)
MRTA	Mass Rapid Transit Authority of Thailand
MRTB	Ministry of Road Transport and Bridges (Bangladesh)
MSW	municipal solid waste
NAPPP	National Agency for Public Private Partnerships
NDRC	National Development and Reform Commission
NEA	National Environmental Act
NEC	National Executive Council
NEDA	National Economic and Development Authority
NEPC	National Energy Policy Council
NEPRA	National Electric Power Regulatory Authority
NGO	nongovernment organization
NHA	National Highway Authority (Pakistan)
NHAI	National Highway Authority of India
NHDP	National Highways Development Project
NWRB	National Water Resources Board
NWSDB	National Water Supply and Drainage Board
O&M	operation and maintenance
PAT	Port Authority of Thailand
PDAM	Perusahaan Daerah Air Minum (Public Water Utility Department)
PDF	project development fund
PDMF	Project Development and Monitoring Facility
PLN	Perusahaan Listrik Negara (State Electric Company)
PNGPCL	PNG Ports Corporation Limited

PPA	power purchase agreement
PPIB	Private Power and Infrastructure Board
PPL	PNG Power Limited
PPP	public-private partnership
PPPAC	Public-Private Partnership Approval Committee
PPPGb	Public-Private Partnership Governing Board
PPRA	Public Procurement Regulatory Authority
PRC	People's Republic of China
PRDC	Petroleum Resources Development Committee
PRDS	Petroleum Resources Development Secretariat
PUCSL	Public Utilities Commission of Sri Lanka
RBI	Reserve Bank of India
RFP	request for proposal
RFQ	request for qualification
SAGT	South Asia Gateway Terminals Private Limited
SBP	State Bank of Pakistan
SEC	Securities and Exchange Commission
SECI	Solar Energy Corporation of India
SEPO	State Enterprise Policy Office
SIA	social impact assessment
SLPA	Sri Lanka Ports Authority
SLSEA	Sri Lanka Sustainable Energy Authority
SOE	state-owned enterprise
SPV	special purpose vehicle
TAMP	Tariff Authority of Major Port
TEU	twenty-foot equivalent unit
THC	terminal handling charge
TRB	Toll Regulatory Board
ULB	urban local body
VFM	value for money

VGf	viability gap fund
WPI	wholesale price index
WRB	Water Resources Board
WTO	World Trade Organization

Measures and Weights

FEU	forty-foot equivalent unit
GW	gigawatt
km	kilometer
MW	megawatt
m	meter
m ³	cubic meter
TEU	twenty-foot equivalent unit

Currencies

B	Thai baht
D	Vietnamese dong
GEL	Georgian lari
K	Papua New Guinean kina
₱	Philippine peso
PR₹/PR₹s	Pakistan rupee/rupees
₹	Indian rupee/rupees
Rp	Indonesian rupiah
SLRe/SLRs	Sri Lanka rupee/rupees
Tk	Bangladeshi taka
T	Kazakhstani tenge
CNY	Chinese yuan

Currency Units

as of October 2018

₱1.00 = \$0.02	\$1.00 = ₱50.00
D1.00 = \$0.000044	\$1.00 = D22,700.00
K1.00 = \$0.31	\$1.00 = K3.23
B1.00 = \$0.03	\$1.00 = B35.00
CNY1.00 = \$0.16	\$1.00 = CNY6.30
Tk1.00 = \$0.01	\$1.00 = Tk83.84
GEL1.00 = \$0.38	\$1.00 = GEL2.61
₹1.00 = \$0.014	\$1.00 = ₹72.54
Rp1.00 = \$0.000067	\$1.00 = Rp14,901
PR\$1.00 = \$0.0081	\$1.00 = 123.58

GUIDANCE TO UNDERSTANDING THE REPORT

Topic Coverage

For each of the developing member countries covered, the information and data are organized into the following topic clusters:

Table B: Country-Level Topics

Topic	Description
Regulatory framework	Intends to capture the progress of a country's regulatory framework in relation to the governing PPP type of arrangement against the number of subcategories: (i) existence of dedicated PPP laws, (ii) allowed PPP types, (iii) eligible infrastructure sectors, (iv) treatment of unsolicited bids, (v) institutional PPPs, (vi) land rights, (vii) environmental and social issues, (viii) foreign investor participation restrictions, (ix) dispute resolution and enforcement mechanism, (x) lender's security rights, (xi) termination and compensation, (xii) government support, and (xiii) standardized PPP contracts used in the market
Institutional capacity for implementation	Aims to monitor a capacity of a country to plan, prepare, and procure PPP projects. It has the following subcategories: (i) PPP institutional setup, (ii) PPP project planning, (iii) PPP project preparation, (iv) risk allocation, and (v) PPP project procurement
PPP market maturity	Illustrates a PPP market maturity by counting the number of PPP projects that achieved financial close, and number of projects currently in preparation and procurement
Financial facilities	Aims to monitor availability and range of financial products for PPP projects, such as commercial bank loans, hedging, and bond financing

PPP = public-private partnership.

Table C: Sector-Level Topics

Topic	Description
Regulatory framework	Sector-specific regulations and regulators that have an impact on the success of a PPP project, for example, such as regulations of tariffs and service levels
Institutional capacity for implementation	Aims to illustrate a capacity of a country to plan, prepare, and procure PPP projects in each sector
Features of past PPP projects	Presents features of past PPP projects realized in a sector on various topics: (i) PPP projects that achieved financial close, (ii) foreign investor participation, (iii) government support, (iv) payment mechanism, (v) tariff levels, (vi) typical risk allocation, and (vii) performance requirements
Local capabilities	Comments on availability of contractors and operators in the local market in each sector
Project financing	Provides statistics on the type of PPP project financing realized for past PPP projects in a sector
Challenges	Comments on challenges of PPP progress in each sector, as well as discusses currently implemented tackling measures (if available)

PPP = public-private partnership.

Each of the topics and associated subtopics presented in Table B and Table C is characterized by qualitative and quantitative indicators. Qualitative indicators take the form of a question, to which “yes” or “no” answers can be given. Quantitative indicators are represented in numbers, ratios, investment value, and duration.

A detailed list of all indicators with explanations is provided in the Appendix.

Data Presentation in the Report

Regarding presentation, there are two types of progress indicators:

- (i) Indicators reflecting features of current policies and regulations. These are represented in the report in the tables with an **orange** color string.
- (ii) Indicators reflecting what happens in practice. These are represented in the report in the tables with a **blue** color string.

An example is shown below:

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

	1990– 2016	1990– 2017	In 2017
Number of PPP projects that reached financial close under the latest PPP law	119	121	2

In addition, for ease of perception, some indicators are color coded using a traffic light pattern, where **green** is considered positive based on internationally recognized good practice, **red** is considered negative, while **yellow** represents neither strongly positive nor negative.

In the assessment, the following approach was used:

- If the regulations are silent on the possibility of compensation payment, then the indicator is marked ✖ and in **red**.
- If the regulations are silent on the possibility of compensation payment, but there have been known precedents in the past, and it can be negotiated at a contract level, then the indicator is marked ✓ and in **yellow**.
- If compensation payment is expressly regulated, then the indicator is marked ✓ and in **green**.

Where the information has not been available, “no data” is stated in the report.

Where an indicator is considered not applicable, “n/a” is stated in the report.

Time Periods

Research was carried out from December 2017 to March 2018, with the aim of reflecting the status as of the end of 2017. Therefore, some indicator data may have changed between that period and the date of publication of the report.

In country-level and sector-level sections, quantitative data in relation to the number of projects reflect the cumulative number of projects over the periods 1990–2016 and 1990–2017. Otherwise, data represent the status at each individual year.

1. BANGLADESH

The Government of Bangladesh,¹ recognizing the need to improve or develop infrastructure, has been putting emphasis on public-private partnership (PPP) in recent years. A Policy and Strategy for PPP was introduced in 2010, which improved the regulation of PPP projects and established an Office for PPP to promote PPPs, but with no statutory authority. Subsequently, a PPP Act was enacted in 2015, aiming to facilitate the development of core sector public infrastructure and services.

Overall, the PPP legal framework is reasonably comprehensive and enables a wide range of provisions to mitigate private sector risk. Following the PPP Act, the institutional setup improved as the Office for PPP became the PPP Authority under the Office of the Prime Minister, with responsibilities including appointing advisors, developing and approving PPP contracts, and supervising the progress of PPP projects. A new PPP unit was established under the Ministry of Finance which approves government funding to a PPP.

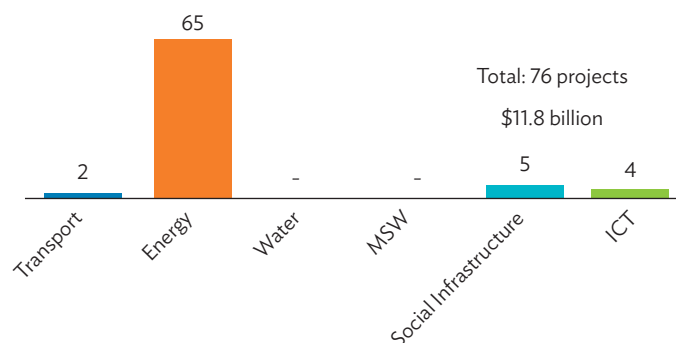
A further significant improvement in institutional arrangements followed the publication of the Procurement Guidelines for PPP Projects in 2016, which sets out clear and comprehensive requirements for project preparation documents, and clear and streamlined procedures for PPP procurement, including improved transparency of information to bidders. These guidelines were subsequently revised in 2018; the Procurement Guidelines for PPP Projects (2018) are the guidelines that are currently in place.

This generally supportive regulatory and institutional framework is reflected in the significant number of closed PPP projects. Most of the projects to date have been in thermal power generation and are not categorized as PPPs in Bangladesh. There have also been projects successfully implemented in the social infrastructure, transport, and information and communication technology (ICT) sectors.

A list of 47 approved projects published on the PPP Authority website indicates a promising PPP pipeline, mainly in the social infrastructure and transport sectors, in addition to a number of independent power producer (IPP) projects which are under planning and listed in the Sustainable and Renewable Energy Development Authority projects database.

¹ The *PPP Monitor* is envisaged to be a dynamic product and comments for improving data quality are welcome and can be incorporated in future editions. It should also be noted that the report is using standardized definitions which may not match a particular developing member country's definitions. For the meaning of each indicator, please refer to the Appendix.

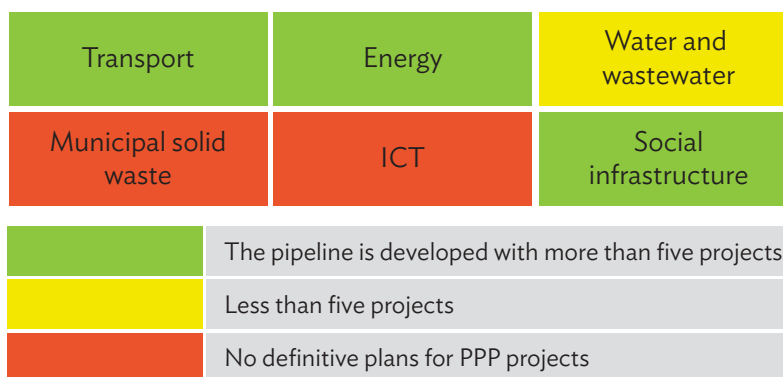
Figure 1.1: PPP Projects in Bangladesh that Have Reached Financial Close, 1990–2017



ICT = information and communication technology, MSW = municipal solid waste.

Sources: World Bank Group. 2018. *World Bank Asia Pacific Private Participation in Infrastructure (PPI) Database*. <http://ppi.worldbank.org/> (accessed 29 January 2018); IJGlobal. *IJGlobal Project Finance and Infrastructure Journal*. <http://www.ijglobal.com>; Government of the People's Republic of Bangladesh, PPP Authority (Prime Minister's Office). *PPP Projects*. <http://www.pppo.gov.bd/projects.php>; Sustainable and Renewable Energy Development Authority Database. http://www.sreda.gov.bd/index.php/ee_master_pdf.

Figure 1.2: Availability of PPP Pipelines in Bangladesh by Sector



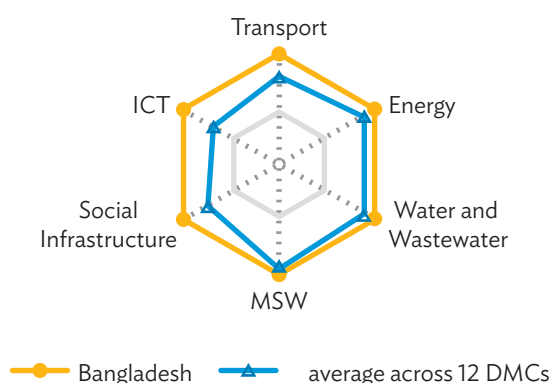
ICT = information and communication technology, PPP = public-private partnership.

Note: The projects included are published in the official sources.

Source: Mott MacDonald.

In Bangladesh, foreign investors are free to make investments except for a few reserved sectors such as defense equipment and machinery and production of nuclear energy. There is no limitation pertaining to foreign equity participation in non-reserved sectors (Figure 1.3).

Figure 1.3: Maximum Allowed Foreign Ownership of Equity in Greenfield PPP Projects in Bangladesh



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Up to 2017, at least 29 PPP projects, representing 38% of the total number of financially closed projects, involved foreign investors, which was above the regional average of 31% (Figure 1.4). The largest proportion of foreign sponsor participation had been in the transport and social infrastructure sectors (Figure 1.5).

Figure 1.4: PPP Projects in Bangladesh with Foreign Sponsor Participation, 1990–2017

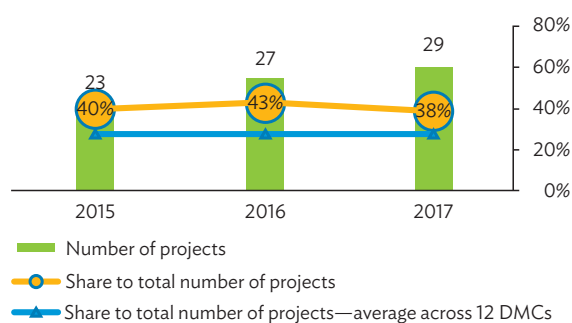
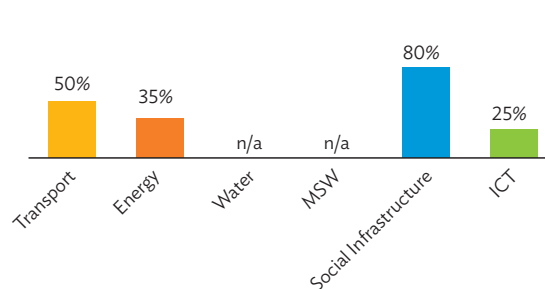


Figure 1.5: Share of PPP Projects in Bangladesh with Foreign Sponsor Participation by Sector, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, n/a = not available, PPP = public-private partnership.

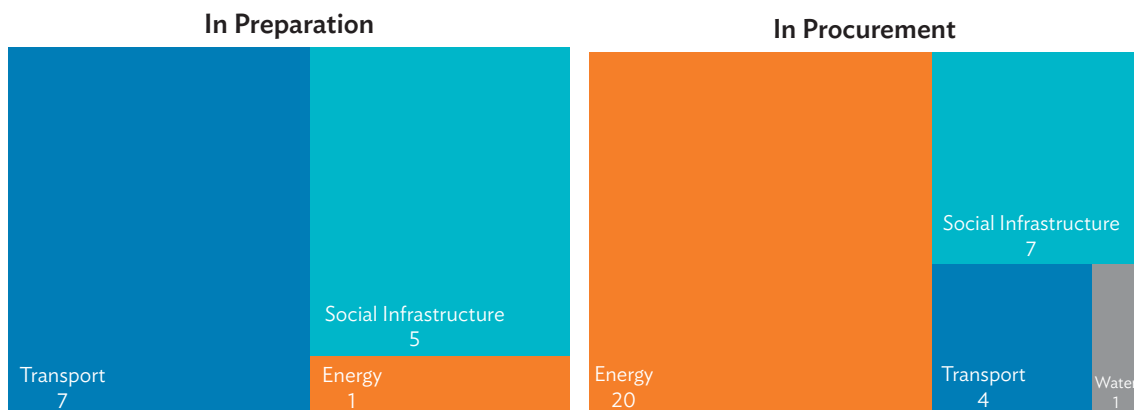
Source: Mott MacDonald.

Regarding the local debt market, the tenure offered is too short to meet the needs of capital-intensive large infrastructure PPP projects. Projects are usually financed through simple, organically available equity and plain debt. Domestic project financing is a hybrid between project finance and commercial debt transactions. It includes taking security on project assets or obtaining corporate guarantees from the parent company.

Many infrastructure projects in Bangladesh have been financed by the Investment Promotion and Financing Facility Project (IPFF) managed by the Bangladesh Bank with the financial assistance of the International Development Association. Bangladesh Bank allocates funds from the IPFF fund to local financial institutions, which then lend to the infrastructure project company. The Asian Development Bank (ADB) is also a major player in infrastructure financing in PPP projects in Bangladesh. Under public-private infrastructure development facilities, ADB has been providing long-term loans for PPP projects since 2008 through the Infrastructure Development Company Limited, a state-owned specialized infrastructure financing institution.

As of the end of 2017, there were 13 projects in preparation, mainly in the transport and social infrastructure sectors, and 32 projects in procurement, most of them in the energy sector (Figure 1.6).

Figure 1.6: PPP Projects in Bangladesh Currently in Preparation and in Procurement, 2017



PPP = public-private partnership.

Source: Mott MacDonald.

Key Developments from 2016

The most significant change from 2016 in the PPP environment in Bangladesh relates to the fact that in June 2017, the existing PPP legal and regulatory framework was completed by a notification from the Government of Bangladesh entitled “Policy for Implementing PPP Projects through Government to Government (G2G) Partnership, 2017.” The policy aims to create a framework for developing PPP projects in partnership with other governments, through their state-owned or private sector entities.

1.1 Country Profile

1.1.1 Regulatory Framework

1.1.1.1 PPP Law

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

	1990– 2016	1990– 2017	In 2017
Number of PPP projects that reached financial close under the latest PPP law	2	15	13

The Bangladesh PPP Act (or PPP Law) was approved by the Parliament and enacted on 16 September 2015. The PPP Law replaced the Policy and Strategy for PPP introduced in 2010. The objective of the PPP Law is to facilitate the development of core sector public infrastructure and services vital for the people of Bangladesh.

The PPP Law has seven chapters:

- Chapter 1 includes the preliminaries and definitions.
- Chapter 2 provides for the establishment of a PPP Authority and its role.
- Chapter 3 determines the provisions for the identification and approval of PPP projects.
- Chapter 4 broadly covers the selection of a private partner to develop and execute PPP projects, with the detailed process set out in the Procurement Guidelines for PPP Projects, 2018 (PPP Procurement Guidelines).
- Chapter 5 covers transparency, corruption, and conflict of interest.
- Chapter 6 identifies some of the key issues that should be covered in a PPP contract. It also provides for land access rights and the right of the private partner to impose a levy on users for accessing public services or purchasing public goods, and includes provisions relating to the governing law and dispute resolution process to be adopted under a PPP contract.
- Chapter 7 includes miscellaneous measures covering issues such as grievance procedures and confidentiality.

In June 2017, the existing framework was completed by a notification from the Government of Bangladesh, entitled “Policy for Implementing PPP Projects through Government to Government (G2G) Partnership, 2017.” The policy aims to create a framework for developing PPP projects in partnership with other governments, through their state-owned or private sector entities.

1.1.1.2 PPP Types

	2016	2017
Number of PPP types defined in the PPP regulations	no data	no data

Although specific types of PPP contracts are not expressly defined in the available regulatory documentation, the different contractual models for PPPs in Bangladesh included in the “Your Guide to PPP in Bangladesh” are follows:

- joint venture and partial divestiture;
- concessions, build–operate–transfer, build–own–operate–transfer, build–own–operate, project finance initiative, build–lease–transfer, design–build–finance–operate;
- leases and affermage; and
- management and operating contracts.

1.1.1.3 Eligible Sectors

	2016	2017		2016	2017
Transport			Energy		
Roads	✓	✓	Power generation	✓	✓
Railways	✓	✓	Power transmission	✓	✓
Ports	✓	✓	Power distribution	✓	✓
Airports	✓	✓	Oil and gas	✓	✓
Water and wastewater	✓	✓	Information and communication technology	✓	✓
Municipal solid waste	✓	✓	Social infrastructure	✓	✓

Whereas the Policy and Strategy for PPP (2010) defined the specific sectors eligible for PPP, the PPP Law (2015) takes a less prescriptive approach, and instead entitles the relevant contracting authority to enter in a PPP contract for the construction or reconstruction of infrastructure. Infrastructure is very broadly defined as “any new or existing, physical or nonphysical infrastructure in the public sector through which public goods or public services or both are created or provided.”

It should be noted that in Bangladesh, energy sector IPPs are regulated by separate laws and generally follow a different approval and procurement method. Please refer to section 1.5 on the governance of energy projects.

1.1.1.4 Other Applicable Restrictions

	2016	2017
Project funding structure	none	none
Project capital investment size	none	none

The Policy and Strategy for PPP (2010) classified PPP projects by investment size (as identified in the prefeasibility study) into small, medium-sized, and large projects. However, this distinction has not been carried through into the PPP Act or the PPP Procurement Guidelines.

Although a threshold on the capital investment size is not in place under the PPP Law or the PPP Procurement Guidelines, the PPP Screening Manual (2013) sets a condition in relation to the project size (i.e., Screening Condition 5: Sufficient Size) to ensure that the transaction delivery costs are not disproportionate to the project size.

1.1.1.5 Unsolicited Bids

	2016	2017
Acceptance of unsolicited proposals	✓	✓
Eligibility of the project proponent to have:		
Competitive advantage at bid evaluation	✓	✓
Swiss challenge	✗	✗
Compensation of the project development cost	✗	✗
Government support for land acquisition and resettlement cost	✓	✓
Government support in the form of viability gap fund and guarantees	✓	✓

According to the Guidelines for Unsolicited Proposals (2016), which have now been revised and are referred to as the Guidelines for Unsolicited Proposals (2018), the private sector proponent can submit a concept note—setting out the proposed PPP project scope and its past relevant experience—to the contracting authority for review and consideration, with a copy to the applicable line ministry and the PPP Authority. If a concept note obtains the necessary approvals, then the applicable proponent will be asked to submit its detailed unsolicited proposal. However, the government is not obliged to consider the proposal.

The mode of competitive bidding for unsolicited proposals may include a bonus system or other appropriate methods that may be proposed by the PPP Authority and approved by the approving authority (i.e., the Cabinet Committee on Economic Affairs [CCEA]). According to paragraph 17 of the Guidelines for Unsolicited Proposals (2018), the bonus for the unsolicited bidder would be equivalent to 7% of the evaluation score assessed by the evaluation committee for the proposal or bid submitted by the unsolicited bidder. In previous guidelines (i.e., PPP Unsolicited Procedures 2014), a Swiss challenge system was also included in the mode of competitive bidding.

With regard to any project development costs, paragraph 18 (d) of the Guidelines for Unsolicited Proposals (2018) expressly states that all costs and expenses associated with the preparation and submission of the unsolicited proposal or any other costs would be fully borne by the original proponent.

It is noted that the Guidelines for Unsolicited Proposals (2018) make no specific reference to government support for land acquisition and resettlement costs or viability gap fund (VGF) (except that during the project development phase, the contracting authority may seek the PPP Authority's approval to assess the need for VGF) and guarantees; however, the PPP Procurement Guidelines shall apply to unsolicited proposals subject to incorporation of the requirements of the unsolicited proposal guidelines.

1.1.1.6 State-Owned Enterprise Participation

	2016	2017
Are institutional PPP arrangements allowed (e.g., joint venture between government or state-owned enterprises and private firms as a special purpose vehicle company)?	✓	✓

	1990–2016	1990–2017	In 2017
Institutional PPP projects (number)	3	4	1
Institutional PPP projects (as a share to the total number of PPP projects)	5%	5%	8%

Information on state-owned enterprise (SOE) participation in PPP projects is not available. However, it is noted that a joint venture between a private firm and an SOE was awarded a PPP project in the energy (thermal power generation) sector. SembCorp Industries (owning 71% stake in the project) and state-owned North-West Power Generation Company Limited (holding the remaining 29%) are the project sponsors for the Sirajganj 414-Megawatt (MW) Dual Fuel Combined Cycle Power Plant, which reached financial close in August 2017.

1.1.1.7 Land Rights

	2016	2017
Which of the following is permitted to the private partner?		
Transfer land lease/use/ownership rights to third party	✓	✓
Use leased/owned land as collateral	✓	✓
Mortgage leased/owned land	no data	no data
Is there a legal mechanism for granting wayleave rights, for example, laying water pipes or fiber cables over land occupied by persons other than the government or the private partner?	no data	no data
Is there a land registry/cadastre with public information on land plots?	✓	✓
Which of the following information on land plots is available to the private partner?		
Appraisal of land value	✓	✓
Landowners	✓	✓
Land boundaries	✓	✓
Utility connections	×	×
Immovable property on land	✓	✓
Plots classification	×	×

There is no special regulation regarding land rights under the PPP framework in Bangladesh; therefore, the general law will apply. The 1972 Constitution (last amended in 2014) provides that all citizens shall have the right to hold, acquire, transfer, and dispose of property; however, the 1950 State Acquisition and Tenancy Act sets a 33-acre land ceiling on private landowners.

The International Comparative Legal Guides for Bangladesh state that, in practice, there is a general understanding that foreign entities cannot own land (based on the Land Office refusing to allow registration to any person not holding a Bangladeshi identification) and, as such, land has to be owned by foreigners through incorporating a company in Bangladesh. The International Comparative Legal Guides also note that, in many cases, land owned by municipal corporations is leased out to interested parties for long tenures, with restrictions in respect of the transfer of a lease to a foreign entity.

According to the Investment Policy Review by UNCTAD (2013), access to land titles and land registration are subject to many laws and regulations, including the Transfer of Property Act of 1882, the Registration Act of 1908, and the Land Reforms Board Act of 1989. These laws and regulations makes it complex, long, and costly to administer and find relevant information for a piece of land.

The Bangladesh Registration Rules (2014) stipulate that, among other things, land value, owners, boundaries, and immovable property on land should be captured during land registration.

1.1.1.8 Environmental and Social Issues

	2016	2017
Is there a local regulation establishing a process for environmental impact assessment?	✓	✓
Is there a legal mechanism for the private partner to limit environmental liability for what is outside of its control or caused by third parties?	no data	no data
Is there a local regulation establishing a process for social impact assessment?	✓	✓
Is there involuntary land clearance for PPP projects?	✓	✓

The Environment Conservation Act (1995) establishes the Department of Environment, which enforces the Environmental Clearance Certificate scheme. The scheme makes it compulsory for any industrial project to obtain a permit before operating. The Environmental Conservation Rules of 1997 define the procedures that industrial investors have to follow in order to obtain a certificate.

Furthermore, the feasibility study of a PPP project includes an overview of environmental and social issues that may need to be addressed (Procurement Guidelines for PPP Projects, 2018), and legislation requires an environmental impact assessment (EIA) to be carried out (PPP Screening Manual, 2013). An EIA assesses the direct and indirect effects of a project on humans, fauna, and flora; soil, water, air, climate, and landscape; and material assets and the cultural heritage.

There is no special regulation regarding land clearance for PPP projects; however, the Government of Bangladesh has the right, for the benefit of the public, to take private ownership of land by compulsory purchase. This practice has been used for a number of projects, including social infrastructure and transportation projects.

1.1.1.9 Foreign Investor Participation Restrictions

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Transport			Energy		
Roads	100%	100%	Power generation	100%	100%
Railways	100%	100%	Power transmission	100%	100%
Ports	100%	100%	Power distribution	100%	100%

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Airports	100%	100%	Oil and gas	100%	100%
Water and wastewater			Municipal solid waste	100%	100%
Bulk water supply and treatment	100%	100%	Social infrastructure		
Water distribution	100%	100%	Healthcare infrastructure	100%	100%
Wastewater treatment	100%	100%	Healthcare services	100%	100%
Wastewater collection	100%	100%	Education infrastructure	100%	100%
Information and communication technology			Education services	100%	100%
Fixed line infrastructure	100%	100%	Government buildings	100%	100%
Fixed line services	100%	100%	Prisons and correction centers	100%	100%
Wireless/mobile infrastructure	100%	100%	Social housing	100%	100%
Wireless/mobile services	100%	100%	Sport and leisure facilities	100%	100%

Pursuant to Paragraph 1, Chapter 9 of the Guidelines for Foreign Exchange Transactions (Forex Guidelines), foreign investors are free to make investments in Bangladesh except for a few reserved sectors such as arms and ammunitions, nuclear energy/power, security printing, and minting, as mentioned in the Industrial Policy of the Government in force.

There is no limitation pertaining to foreign equity participation in non-reserved sectors.

An entity carrying out a project in a non-reserved sector may therefore be set up in collaboration with local investors or may be wholly owned by the foreign investors. Therefore, the selected private partner can be a local entity, an entity with 100% foreign ownership, or a foreign-owned local entity.

It is understood that a number of PPPs that have reached financial close were exclusively owned by foreign enterprises, for example, in the transport sector (airports and ports), in the energy sector (thermal power generation), and in the social infrastructure sector (health).

Is there any restriction for foreign investors on?	2016	2017
Land use/ownership rights as opposed to similar rights of local investors	yes	yes
Currency conversion	yes	yes

With regard to the use of foreign labor, nationals of all foreign countries, with the exception of Israel, are eligible for work permits in Bangladesh as long as they are aged 18 years or older. However, per the Bangladesh Investment Development Authority (BIDA) and Bangladesh Export Processing Zones Authority (BEPZA) guidelines, expatriate work permits can normally be granted only for posts that require skills and expertise that is not available locally. The guidelines also specify that the ratio of expatriate to national employees in any company is capped at 1 to 20 in industrial companies or 1 to 5 in commercial offices. In addition, according to the Investment Policy Review by UNCTAD (2013), the regulatory framework on the issue of work permits lacks transparency and clarity. The laws and regulations that are relevant include the Foreigners Act of 1946, the Foreigners Order of 1951, the Registration of Foreigners Act of 1939, the Bangladesh Control of Entry Act of 1952, and guidelines from the BIDA and BEPZA.

The key trade policy in Bangladesh is covered in the Export Policy 2015–2018, the Import Policy Order 2015–2018, the Imports and Exports (Control) Act of 1950, and some sectoral policies. According to the Investment Policy Review by UNCTAD (2013), approval of imports of machinery and equipment has to be sought from BIDA. However, exemptions of duties on the import of machinery and spare parts (for a period of 12 years, or up to 10% of the total capital invested) are offered by the government in certain projects, for example, power generation. Moreover, companies located in the export processing zones benefit from the standards exemptions of import duties.

The Foreign Private Investment Promotion and Protection Act 1980 is the key law which enables the government to regulate foreign investments, and provides a fair and equitable treatment for foreign investors, the usual protections in relation to expropriation, and provisions for foreign exchange. The foreign exchange regulations may restrict repatriation of divestment proceeds to the net asset value, with repatriation of capital and capital gains being subject to strict reporting requirements or authorization by the central bank of Bangladesh, Bangladesh Bank.

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	27	29	2
PPP projects with foreign sponsor participation (as a share to the total number of PPP projects)	43%	38%	15%

It is noted that the number of PPP projects in Bangladesh with foreign sponsor participation could be higher, since for a number of projects, ownership information is not available.

1.1.1.10 Dispute Resolution and Enforcement Mechanism

	2016	2017
Can a foreign law be chosen to govern PPP contracts?	✓	✓
What dispute resolution mechanisms are available for PPP agreements?		
Court litigation	✓	✓
Local arbitration	✓	✓
International arbitration	✓	✓
Has the country signed the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?	✓	✓

The PPP Act expressly provides that disputes arising from the application or interpretation of the provision of the PPP agreement would be settled through mutual agreement between the parties; or, if the dispute is not settled, intervention of a neutral expert mediator would be resorted to and, if the dispute is not resolved by the neutral expert mediator, it would have to be referred to arbitration. Furthermore, disputes may only be settled as described above irrespective of other acts or enactments, by means of national or international arbitration rules, and the seat of arbitration would be in Dhaka; however, in special circumstances through mutual agreement, the seat may be in other countries as well. However, remedy from national or international courts cannot be sought before endeavoring to resolve the dispute under the dispute resolution process as set out in the PPP Act, as it takes precedence over any acts or enactments.

1.1.1.11 Lender's Security Rights

	2016	2017
Does the law specifically enable lenders the following rights?		
Security over the project assets	✓	✓
Security over the land on which they are built (land use right)	✓	✓
Security over the shares of a PPP project company	✓	✓
Can there be a direct agreement between the government and lenders ^a	✓	✓
Do lenders get priority in the case of insolvency?	✓	✓
Can lenders be given step-in rights?	✓	✓

Note:

^a There is no explicit regulation, but there are provisions to give comfort to lenders under the Foreign Private Investment Act (1980). Furthermore, there are no restrictions under applicable laws prohibiting direct agreements.

According to the Bangladesh Bank, the policy framework for foreign investment in Bangladesh is based on the Foreign Private Investment (Promotion and Protection) Act (1980), which ensures legal protection to foreign investment in Bangladesh against nationalization and expropriation. It also guarantees nondiscriminatory treatment between foreign and local investment, and repatriation of proceeds from sales of shares and profit.

It is not possible to give asset security by means of a general security agreement, due to the requirement of perfection of security, which involves registration, notification, or recording with separate regulators or parties. An agreement is required in relation to each type of asset, notwithstanding there are different forms of security available such as mortgage over immovable property, hypothecation over present and future book debts, movable properties and plant and machinery, pledge over shares, letters of credit, and corporate or personal guarantees.

Security over shares can be taken by way of pledge of shares, by executing a share pledge agreement. For creating a security interest by way of pledge in favor of the lender, the chargors are required to deposit with a third party

- original certificates in respect of the shares; and
- blank share transfer forms executed by each of the chargors, along with verification of the same by the borrower.

Secured creditors have priority over all other creditors and claimants, except floating charge holders as per the Companies Act (1994) and the Bankruptcy Act (1997). The debts are payable to the fullest extent unless the assets are insufficient to meet them, in which case they are abated in equal proportions.

1.1.1.12 Termination and Compensation

	2016	2017
Does the law specifically enable compensation payment to the private partner in case of early termination due to:		
Public sector default or termination for reasons of public interest	✓	✓
Private sector default	✓	✓
Force majeure	✓	✓
Does the law enable the concept of economic/financial equilibrium?	no data	no data
Does the law enable compensation payment to the private partner due to:		
Material adverse government action	✓	✓
Force majeure	✓	✓
Change in law	✓	✓

The indicators (marked in yellow in the table above) reflect the fact that the regulatory framework does not expressly regulate material adverse government action, force majeure, or change in law. Furthermore, Chapter 6 of the PPP Act on terms and conditions of partnership contract does not expressly state that the contract shall contain provisions for grounds for termination. However, this is not an exhaustive list, and compensation for such events potentially can be negotiated within the contractual terms agreed between the parties in the PPP agreement.

1.1.1.13 Government Support

	2016	2017
Is project development fund available?	✓	✓
Land acquisition support from the government		
Resettlement and/or compensation cost to residents at the project site	✓	✓
Imposed limits on time frame to complete land acquisition (day)	×	×
A dedicated agency to streamline land acquisition	×	×
Exemption from/reduction of land use fees	no data	no data
Viability gap fund (VGF)	✓	✓
Limits to VGF as a percentage of a project's capital cost	30%	30%
Government guarantees^a		
Currency inconvertibility and transfer risk	×	×
Foreign exchange risk	×	×
War and civil disturbance risk	×	×
Breach of contract risk	×	×
Regulatory risk	×	×
Expropriation risk	×	×
Government payment obligation guarantee ^b	✓	✓
Credit guarantees	×	×
Minimum demand/revenue guarantee	×	×
Availability-/performance-based payment contracts^c	✓	✓
Tax subsidies	✓	✓

Notes:

^a Indicators are marked red if the regulation do not contain any provision for a particular type of guarantee.

^b Regulations are silent on this, but some energy IPP projects received payment guarantees, therefore it is understood that this type of guarantee can be provided on a case-by-case basis.

^c Regulations are silent on this; however, all energy generation projects have been implemented on an availability payment basis under PPA.

Details of available government support for PPP projects are listed in Table 1.1.

Table 1.1: Details of Available Government Support for PPP Projects in Bangladesh

Government Support Type	Comments
PDF	PPPTAF was established in 2012 to provide early-stage project development funding support to sanctioned PPP projects.
Land acquisition and resettlement	The government support for PPP projects may also take the form of acquisition or requisition of land, resettlement of populations, or the provision of utilities. Examples where the government was responsible for land acquisition are the Bibiyana 300–450 MW Gas-Fired Combined Cycle Power Project and the Dhaka Elevated Expressway PPP Project. According to the World Bank Benchmarking of PPP Procurement in Bangladesh, the procuring authority spends an average number of 270 calendar days obtaining permits, land, and/or right-of-way required under the regulatory framework. The applicable law in this regard is the Acquisition and Requisition of Immovable Property Act, 2017.
VGF	<p>The PPP Law sets out the following forms of financial participation of the government in the PPP projects. The government may provide financing against the following activities of PPP projects:</p> <ul style="list-style-type: none"> • technical assistance financing, • viability gap funding, • financing against equity and loans, • financing against linked component, and • financing against any other activities prescribed by the PPP Authority. <p>According to the Guidelines for VGF for PPP Projects (2012), the VGF is applicable only to BOT projects, with the total amount in the form of capital grant not exceeding 30% of total estimated project cost, and the amount of VGF being equivalent to the lowest offer in the competitive tender for capital subsidy or annuity. Furthermore, for a PPP project to be eligible for VGF, the following criteria should be met:</p> <ul style="list-style-type: none"> • the project is implemented through competitive tendering process, • the ERR of the project meets the threshold level specified by the MOF PPP Unit, • the project is in one of the sectors stipulated in the Policy and Strategy for PPP (2010) (now repealed and replaced), and • the project provides a service against payment of a predetermined tariff or user charge.
Government guarantees	PPP regulations are silent on the provision of government guarantees. In practice, a number of energy generation projects received payment guarantees under PPAs; however, in other sectors, guarantees have not been provided.

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Table 1.1 *continued*

Government Support Type	Comments
Availability-based payment mechanism	PPP regulations are silent on the possibility of an availability-based payment method. In practice, all energy generation projects have been implemented on an availability payment basis under PPA. A road PPP project that is currently in procurement (Improvement of Hatirjheel [Rampura Bridge]–Shekherjaiga–Amulia–Demra Road) is also based on an availability-based payment mechanism.
Tax subsidies	The government is offering fiscal incentives to PPP investors, such as reduced import tax on capital goods and various tax holidays, with the aim of reducing the cost of implementing the project and enhancing the viability of the project. The government has also provided tax exemptions for foreign technicians, and on capital gains and royalty fees and on the income of a project company in relation to the implementation of PPP projects in certain sectors (including highways, bridges, and ports). VAT exemption is also available in relation to certain services provided for PPP projects. Depending on the location and the sector, the incentives may vary.

BOT = build–operate–transfer, ERR = economic rate of return, MOF = Ministry of Finance, MW = megawatt, PDF = project development fund, PPA = power purchase agreement, PPP = public–private partnership, PPPTAF = PPP technical assistance fund, VAT = value-added tax, VGF = viability gap fund.

Source: Mott MacDonald.

PPP projects that received government support	1990–2016	1990–2017	In 2017
VGF	–	–	–
Government guarantees	22	22	–
Availability-/performance-based payment basis	54	65	11

Data on PPP projects that received government support in the form of land acquisition have not been available. The numbers of the PPP projects undertaken on an availability/performance payment basis entirely refer to energy IPP projects. Similarly, government payment guarantees have been provided for certain energy projects.

1.1.1.14 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Power purchase agreement	✓	✓
Capacity take-or-pay contract	✗	✗
Fuel supply agreement	✓	✓
Transmission and use of system agreement	✗	✗
Performance-based operation and maintenance contract	✗	✗
Engineering procurement and construction contract	✗	✗

The World Bank Benchmarking of PPP Procurement in Bangladesh confirms that standardized PPP model contracts and/or transaction documents have been developed.

1.1.2 Institutional Capacity for Implementation

1.1.2.1 Institutional Setup

	2016	2017
Is there a specialized government agency (or agencies) established for PPP purposes (e.g., PPP unit)?	✓	✓
What role does this PPP unit have?		
Guidance to and coordination between other government agencies	✓	✓
Supporting (e.g., PPP project preparation, appointment of advisers, running project development fund)	✓	✓
Appraisal of PPP project feasibility studies	✓	✓
Approval of PPP projects	✗	✗
Procurement	✓	✓
Managing, monitoring, and enforcing ongoing PPP contracts	✓	✓

PPP-promoting institutions in Bangladesh are provided in Table 1.2.

Table 1.2: Institutions Promoting PPP in Bangladesh

Institution	Role in Promoting PPP
Cabinet Committee on Economic Affairs	Among other things, providing in-principle approval and final approval for a PPP project for the contracting authority to enter into a contract with the preferred bidder and/or the project company.
PPP Authority (Office of PPP)	PPP Authority was initially established as the Office for PPP in September 2010 under the Prime Minister's the Office to promote the PPP concept. Under the 2015 PPP Act, the Office for PPP was institutionalized as a statutory authority. Its powers and functions are set out in the PPP Act and include providing decisions on the financial participation and provision of incentives by government; framing technical and best practice requirements, prequalification, and bid documents; approving the selected bidder; approving the termination of PPP contracts; and approving model PPP contracts.
Line ministry/implementing agency (or contracting authority)	Responsible for the identification, formulation, prequalification, tendering, contract award, and oversight of PPP projects implementation on the basis of the PPP contract.
MOF PPP Unit	Established in the Finance Division of the Ministry of Finance, the unit is responsible for overseeing the fiscal viability of PPP projects and sanctioning support funding for their development and financing, including managing the three key funds: the PPPTAF, viability gap fund, and Bangladesh Infrastructure Finance Fund.

MOF = Ministry of Finance, PPP = public-private partnership, PPPTAF = PPP technical assistance fund.

Sources: Government of Bangladesh. 2016. Procurement Guidelines for PPP Projects. http://www.pppo.gov.bd/download/ppp_office/Procurement-Guideline-for-PPP-Projects-2016_and_Guidelines-for-Unsolicited-Proposals-2016.pdf; Government of Bangladesh. 2015. PPP Act. [http://www.pppo.gov.bd/download/ppp_office/PPP_Law_2015_\(Approved_Translation\).pdf](http://www.pppo.gov.bd/download/ppp_office/PPP_Law_2015_(Approved_Translation).pdf); PPP Procurement Guidelines. www.pppo.gov.bd; Public-Private Partnerships Authority of the People's Republic of Bangladesh. <http://www.pppo.gov.bd/>.

1.1.2.2. Project Planning

	2016	2017
Is there a PPP project pipeline developed and available?	✓	✓
Is preliminary selection of PPP projects consistent with public investment prioritization?	✓	✓
Is there screening/identification methodology to identify a list of potential PPP projects from public investment priority projects?	✓	✓

A list of Cabinet Committee on Economic Affairs (CCEA)-approved projects under the PPP program is advertised on the PPP Authority website. These include

- 13 PPP projects in the transport sector;
- 1 PPP project in the energy sector;
- 1 PPP project in the water and wastewater sector; and
- 32 PPP projects in the social infrastructure sector, which includes health, social housing, economic zones, and tourism.

In addition, many IPPs (considered to be a form of PPP) are listed in the Renewable Energy Master Database of the Sustainable and Renewable Energy Development Authority.

The Policy and Strategy for PPP (2010) sets out a provision for the sectoral coverage of PPP where a number of priority sectors for PPPs have been identified. These areas have been identified as priority areas for delivering PPP projects, and any project meeting this requirement will be deemed to have met the requirement for sector coverage. However, there is no express provision in this regard in the new PPP Procurement Guidelines. According to the PPP Screening Manual (2013), where projects do not fall within any of the listed areas for sectoral coverage of PPP, line ministries and/or implementing agencies will need to demonstrate that the proposed project is embedded in a sector policy or a sector master plan.

1.1.2.3. Project Preparation

	2016	2017
Number of project appraisal stages	2	2
What feasibility analyses are required for the project to be approved as a PPP?		
Technical feasibility	✓	✓
Financial feasibility	✓	✓
Legal feasibility	no data	no data
Environmental and social sustainability	✓	✓
Value for money assessment	✓	✓
Fiscal affordability assessment	✓	✓
PPP structuring and risk allocation	✓	✓
Initial market testing	✓	✓
Number of approvals to be obtained by the public sector to get final go-ahead to commence PPP project procurement	1	1
Is the approval from the Ministry of Finance or equivalent required before commencement of procurement?	×	×
Is it a normal practice to appoint independent, international, and qualified advisors to assist the government with project preparation?	✓	✓

According to the PPP Authority, the PPP Technical Assistance Fund is established to provide early-stage project development funding support to sanctioned PPP projects. The fund covers the cost of professional consultants and advisors needed to ensure that the government achieves appropriate risk allocation in PPP projects, and pre-develops projects to a standard that attracts maximum interest from investors and lenders.

According to the Procurement Guideline for PPP Projects (2018), the scope of a feasibility study may include, but shall not be limited to, the following:

- technical issues,
- commercial and financial considerations,
- environmental factors,
- social issues,
- linked projects, and
- any other issues that may be deemed relevant by the PPP Authority or the contracting authority.

Although not expressly stated in the Procurement Guideline for PPP Projects (2018), the World Bank Benchmarking of PPP Procurement in Bangladesh mentions that value for money and fiscal affordability assessments are carried out as part of the project development, and the PPP Knowledge Lab makes reference to risk identification and market assessment during the preparation of the PPPs.

According to the Procurement Guideline for PPP Projects (2018), the contracting authority or the PPP Authority may appoint external transaction adviser(s) and/or consultant(s), and use any internal and/or in-house experts and/or any other resources retained by the PPP Authority or the contracting authority for different purposes, which may include carrying out the feasibility study, marketing, supporting the procurement process, negotiations, contract signature, condition precedent, and construction and/or operations. It is considered a normal practice to appoint an independent, international, and qualified transaction adviser. Some examples of advisers from the list of CCEA-approved projects in the PPP Authority's website are PricewaterhouseCoopers, Ernst & Young, and International Finance Corporation.

1.1.2.4. Risk Allocation

	2016	2017
Preferred risk allocation matrix as reference	✓	✓

Under section 26 of the PPP Law, the PPP agreement may contain matters relating to risk distribution. Furthermore, during the PPP screening process, it is assessed whether the risk matrix has been completed to show the indicative risk allocation. The PPP Screening Manual (2013) also includes a “typical risk allocation matrix.”

1.1.2.5. Procurement

	2016	2017
Is competitive bidding the only method for PPP partner selection?	no data	no data
In case of competitive tender:		
Prequalification required?	✓	✓
Minimum time allowed to submit prequalification/expression of interest (day)	28	28
Minimum time allowed to submit a bid:		
Domestic bidding (day)	56	56
International bidding (day)	56	56
Is negotiation available?	✓	✓
Is there a process allowing unsuccessful bidders to challenge the award or submit a complaint?	✓	✓
If yes, maximum time allowed to submit a complaint starting from the announcement of a preferred bidder (day)	10	10
Maximum time limit from bid closing date until the selection of a preferred bidder	no data	no data
Maximum time limit from selection of a preferred bidder until contract signing	no data	no data
Transparency: Which of the following is published?		
Procurement notice	✓	✓
Q&A during bid clarification stage	✓	✓
Evaluation results to bidders	no data	no data
Award notice	✗	✗
Contract	✗	✗
Confidentiality	✓	✓

Overall, the selection of a private partner for the delivery of PPP projects is based on four phases:

- identification phase,
- development phase,
- bidding phase, and
- approval and award phase.

The bidding phase for PPP projects can either be a single-stage bidding process or a two-stage bidding process:

- single-stage bidding process—comprises of only an invitation for bid; and
- two-stage bidding process—comprises of a request for qualification (RFQ) as well as a request for proposal (RFP).

The features of the procurement process are presented in Table 1.3.

Table 1.3: PPP Procurement Process in Bangladesh

Theme	Description
Project Announcement	
Advertisement	<ul style="list-style-type: none"> • The contracting authority advertises all RFQ or IFB based on any guidance or standard templates issued by the PPP Authority in at least one Bengali language national newspaper and one English language national newspaper. • All invitations are also advertised on the respective websites of the contracting authority, the applicable line ministry, and the PPP Authority. • The PPP Authority may directly contact any trade missions and/or interested investors in its database to inform them about the launch/issue of the RFQ or IFB. • The contracting authority may require all interested parties to register online in order to access the bid documents and other relevant information and to participate in the bidding process, for which it may fix a charge to be paid by all interested parties in order to download the documentation from the data room.
RFQ	<ul style="list-style-type: none"> • The interested parties complete their registration and become registered entities. • The bidders submit their applications in response to the RFQ. • The bidders are evaluated on the basis of predetermined qualifying criteria stipulated in the RFQ. • The prequalified bidders are shortlisted (maximum number of shortlisted bidders shall be five).
Prequalification evaluation criteria	<ul style="list-style-type: none"> • Technical and financial capacity of the bidders. • Technical capacity may include examples of past experience of having undertaken projects of a similar nature as defined in the RFQ document. • Financial capacity may include examples of experience of having provided and/or raised funds for projects as defined in the RFQ document.

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Table 1.3 *continued*

Theme	Description
Prequalification evaluation method	<ul style="list-style-type: none"> • The shortlisting process may include a single test or multiple tests. • The shortlisting process is carried out based on the criteria as stipulated in the RFQ document. • The RFQ may specify mandatory requirements and/or compliance requirements. If a bidder does not comply with such requirements, its proposal will be rejected.
Shortlist	
RFP	<ul style="list-style-type: none"> • Shortlisted bidders submit their technical proposals and financial proposals in two separate sealed envelopes enclosed together in an outer single envelope. • Initially, only the technical proposals are opened and evaluated in accordance with the RFP on the basis of the predetermined selection criteria stipulated in the RFP. • Thereafter, the financial proposals of only the shortlisted bidders who are compliant and who conformed to the specified requirements under the technical evaluation are opened and evaluated in accordance with the criteria stipulated in the RFP in order to select the preferred bidder.
Methods of interactions with the bidders	<ul style="list-style-type: none"> • The medium of communication is set out in the bid documents and may include e-mail, letter, or fax, or a combination of any. • The evaluation committee, through the contracting authority, may seek written clarifications and/or supplementary information from any bidder through letter and/or e-mail.
Evaluation of proposals	<ul style="list-style-type: none"> • The evaluation method may either include the QCBS method or the CBS method. • The contracting authority and the PPP Authority will determine the appropriate evaluation method on the criteria and the weighting (where relevant), which is clearly stipulated in the RFP or IFB documents. <ul style="list-style-type: none"> – QCBS method: the technical criteria (including commercial criteria, where applicable) and the financial criteria of the proposal or bid (as applicable) are taken into account in the selection of the preferred bidder. There is a technical score and a financial score, which are weighted in order to derive the total score. The shortlisted bidder with the highest total score is awarded the PPP project. – CBS method: the technical criteria (including commercial criteria, where applicable) may be evaluated on a pass/fail and/or scoring basis. The shortlisted bidders who have either passed the technical evaluation, or the requisite number of shortlisted bidders as stipulated in the RFP or IFB who have ranked/scored the highest from among the shortlisted bidders in the technical evaluation, are identified and only their financial proposals or financial bids are opened, evaluated, and scored. The shortlisted bidder with the highest financial score is awarded the PPP project. • The evaluation criteria may also include additional criteria to ensure that there are no tied proposals or tied bids, for example, best and final offer.

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Table 1.3 *continued*

Theme	Description
Investor Selection	
Contract negotiation	The evaluation committee (through the contracting authority) negotiates the contract with the preferred bidder in relation to only those terms which are identified as capable of being negotiated in the PPP contract.
Contract approval	<ul style="list-style-type: none"> • Vetting of contract by the Legislative and Parliamentary Affairs Division (of the Ministry of Law, Justice, and Parliamentary Affairs). • Final approval by CCEA. • The contracting authority issues a Letter of Award within 4 weeks following receipt of CCEA approval.
Contract Signing	

CBS = cost-based selection, CCEA = Cabinet Committee on Economic Affairs, IFB = invitation for bid, PPP = public-private partnership, QCBS = quality and cost-based selection, RFP = request for proposal, RFQ = request for qualification.

Source: Government of Bangladesh. 2018. *Procurement Guidelines for PPP Projects*. http://www.pppo.gov.bd/download/ppp_office/Procurement-Guideline-for-PPP-Projects-2018_and_Guidelines-for-Unsolicited-Proposals-2018.pdf.

According to the Policy for Implementing PPP Projects through Government to Government (G2G) Partnership issued in 2017, a decision to implement a PPP project on a G2G partnership basis may be taken at any time before the bidding phase has started or after the bidding phase if it has not been completed successfully. The PPP Authority may submit an official request to other governments to enter into a G2G Framework Agreement/Memorandum of Understanding, that may define the main features of the procedure (including modalities of expression of interest from other governments, selection process, process for developing, negotiating and agreeing the terms and conditions of the PPP contract, and dispute resolution process). The PPP Authority may also take up a proposal from any other government interested in entering into a G2G Framework Agreement.

1.1.3 PPP Market Maturity

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close	63	76	13
PPP projects currently in preparation	n/a	n/a	13
PPP projects currently in procurement	n/a	n/a	32

Note: It should be noted that the research relied primarily on information reported in public sources, which may not be accurate or contain all the required information. Furthermore, in general, limited information is disclosed to the public in relation to project failures. Therefore, reported numbers of projects in this table may not be exhaustive. Furthermore, it is noted that information regarding thermal power generation projects in the pipeline is not available.

Examples of PPP projects failures and/or renegotiations:

- Projects that were stalled: Dhaka–Ashulia Elevated Expressway PPP—The government had initially decided to implement the project under the PPP framework; however, due to little to no interest from investors, it decided to run the project under a government-to-government agreement;
- Projects renegotiated: Dhaka Elevated Expressway PPP Project—The project was awarded in January 2011 and then renegotiated in December 2013;
- Projects cancelled (post-financial close): Shah Amanat International Airport—A management and lease contract signed in December 2005 was subsequently cancelled in 2007. Two information and communication technology (ICT) projects (WorldTel Bangladesh and Dhaka Telephone Company) are reported to be in distress.

1.1.4 Financial Facilities

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	15	16	1
PPP projects that received export credit agency/international financing institution financing	15	16	1

	2016 ^a	2017 ^b
Availability of nonrecourse/limited recourse hard currency loan	✓	✓
Maximum tenor (year)	5–7 years	5–7 years
Up-front arrangement fee	no data	no data
Floor rate (reference rate)	LIBOR	LIBOR
Margin rate	no data	no data
Political risk cover premium	no data	no data
Availability of nonrecourse/limited recourse local currency loan	✓	✓
Maximum tenor (year)	5–9 years	6–8 years
Up-front arrangement fee	100–200 bps	100–200 bps
Floor rate (reference rate)	Central Bank Lending Rate	Central Bank Lending Rate
Margin rate	no data	no data

	2016 ^a	2017 ^b
Availability of interest rate swaps	✓	✓
Forward duration of interest rate swap (year)	15 years	15 years
Availability of currency swaps	✓	✓
Forward duration of currency rate swap (year)	<5 years	<5 years
Project financing through project bond issuance	✓	✓
Percentage of project bonds out of total debt for project financing	n/a	n/a
Availability of project financing from local public sector banks	✓	✓
Maximum tenor for loan from local public sector banks (year)	5–10 years	5–10 years
Percentage of foreign debt out of total debt for project financing	<30%	<30%
Typical D:E ratio	70:30	75:25
Timeline to financial close	>12 months	>12 months
Minimum DSCR covenant levels	>1.5x	>1.5x

bps = basis points, D = debt, DSCR = debt–service coverage ratio, E = equity, LIBOR = London interbank offered rate.

Note: Central Bank Lending Rate issued by the central bank of Bangladesh, Bangladesh Bank.

^a Sample size = 1 PPP project

^b Sample size = 1 PPP project

The tenure offered by banks in Bangladesh is too short to meet the need of capital-intensive large infrastructure PPP projects. Projects are usually financed through simple, organically available equity and plain debt. Domestic project financing is a hybrid between project finance and commercial debt transactions. It includes taking security on project assets or obtaining corporate guarantees from a parent company.²

Table 1.4 shows the financing structure of selected power plants in Bangladesh.

² Project Finance 2017 Bangladesh, International Comparative Legal Guides. <https://iclg.com>.

Table 1.4: Financing Structure of Selected Power Plants in Bangladesh

Name of the Project	Project Cost (\$ million)	Debt Amount (\$ million)	Debt to Equity
Sirajgani 4 Dual Fuel Power Plant	412	309	75%:25%
United Ashuganj Energy	84	59	70%:30%
Bibiyana Power II	300	210	70%:30%
Sylhet Combined Cycle Power Plant	310	210	68%:32%

Sources: IJGlobal. IJGlobal Project Finance and Infrastructure Journal. <http://www.ijglobal.com>;
World Bank Group. 2018. World Bank Asia Pacific Private Participation in Infrastructure (PPI) Database.
<http://ppi.worldbank.org/>.

Many infrastructure projects in Bangladesh have been financed by the Investment Promotion and Financing Facility Project (IPFF) managed by the Bangladesh Bank with the financial assistance of the International Development Association. The Bangladesh Bank allocates funds from the IPFF fund to local financial institutions, which then lends to the infrastructure project company.³

ADB is also a major player in infrastructure financing in PPP projects in Bangladesh. Under public-private infrastructure development facilities, ADB has been providing long-term loans for PPP projects since 2008 through the Infrastructure Development Company Limited, a state-owned specialized infrastructure financing institution.

There are no active market makers and fixed income funds in Bangladesh's bond market and hence, issuers face challenges in collecting funds and issuing bonds. The country's bond market remains underdeveloped and in its nascent stage. The bond market is therefore unable to support the financing of large infrastructure projects.

The lack of issuers in Bangladesh's bond market has to do with the fact that there is excessive dependence on bank credit. It is easier for corporate borrowers to access credit from banks than to comply with the governance standards required for raising funds through the bond market or to meet the disclosure requirements for listing on one of the exchanges in the country. It takes between an average of 25 to 30 weeks to complete legal formalities in issuing a bond in Bangladesh. This is a much more cumbersome and longer process than taking a bank loan.

³ Infrastructure financing through the domestic capital market in Bangladesh.

1.2 Roads

1.2.1 Regulatory Framework

1.2.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

1.2.1.2 Government Contracting Agency

As discussed in section 1.1.1.9 of this report, government approval and decision on the foreign investor participation is required in certain “controlled” sectors.

The Ministry of Road Transport and Bridges (MRTB) is the state authority that oversees the Road Transport and Highways Division and the Bridges Division. The MRTB is the key contracting agency for road projects.

1.2.1.3 Sector-Specific Regulations

	2016	2017
Does the private partner have the legal right to charge users?	✓	✓

Private concessionaires have a legal right to collect revenue from road users. Depending on the type of PPP contract and/or concession agreement, they may have to inject a portion of the revenue into system maintenance or return a portion to the grantor or the host government agency.

Fees are charged at the agreed tariff, and fee increment is also on a per-project basis.

1.2.1.4 Sector Regulators

The road sector still lacks an independent regulator to perform checks on the service standard, performance, safety, and tariff. The controlling and regulating role is carried out by each subdivision within the MRTB.

1.2.1.5. Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

1.2.2 Institutional Capacity for Implementation

1.2.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The Bangladesh PPP Authority website lists all approved projects under the PPP program. The road sector has three projects in the project development stage (or earlier in the project life cycle).

PPP pipeline of road projects is provided in Table 1.5.

Table 1.5: PPP Pipeline of Road Projects in Bangladesh

No.	Project Name	Length (km)	Value (\$ million)
1	Hemayetpur–Singair–Manikganj PPP Road	32	80–200
2	2nd Padma Multipurpose Bridge at Paturia–Goalundo	no data	no data
3	Dhaka–Chittagong Access Controlled Highway	241	>500

km = kilometer, PPP = public–private partnership.

Source: PPP Authority. *PPP Projects*. <http://www.pppo.gov.bd/projects.php> (accessed 20 February 2018).

1.2.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	3

1.2.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	1	1	-
Competitive bidding process	n/a	n/a	-
PPP projects currently in procurement	n/a	n/a	3 ^a

Note:

^a Flyover from Santinagar to Mawa Road via 4th (New) Bridge over Buriganga River; Improvement of Hatirjheel (Rampura Bridge)–Shekherjaiga–Amulia–Demra Road; and Upgrading of Dhaka Bypass to four lanes (Madanpur–Debogram–Bhulta–Joydebpur).

1.2.3 Features of Past PPP Projects

1.2.3.1 PPP Projects That Have Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	1	1	-
PPP projects that reached financial close (\$ million)	no data	no data	-

As of December 2016, only one project, the Jamuna Bridge management and lease contract in the 1990s, reached financial close.

It should be noted that the Dhaka Elevated Expressway PPP Project was awarded in 2011; however, since then, the project has been having difficulties in getting financing.

1.2.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	1	1	-
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	100%	100%	-

1.2.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	no data
Government guarantees:			
Minimum traffic/revenue guarantees	-	-	-
Availability-/performance-based payment basis	-	-	-

1.2.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	1	1	-
Government-paid contracts	-	-	-

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	✓	✓
Advertising	✓	✓

1.2.3.5 Tariffs

Tariffs on toll (tariff setting and indexation) are regulated by the MRTB. The allowable fare increment is normally stated in each concession agreement.

Examples of current toll rates for PPP road schemes are provided in Table 1.6.

Table 1.6: Examples of Current Toll Rates for PPP Road Schemes in Bangladesh

Road	Toll Type	Motorcycle (Taka)	Car/Light Vehicle (Taka)	Small Bus (Taka)	Large Bus (Taka)	Trucks and Lorries (Taka)
Jamuna (Bangabandhu) Bridge	Open (Taka per trip)	50	500	650	900	850–1,400

PPP = public–private partnership.

Source: Bangladesh Bridge Authority. *Toll Rates*. <http://site.bba.gov.bd/category/toll-rate/> (accessed 9 February 2018).

1.2.3.6 Risk Allocation

Typical risk allocation arrangements in road PPP contracts are provided in Table 1.7.

Table 1.7: Typical Risk Allocation Arrangements in Road PPP Contracts in Bangladesh

Risk	Private	Public	Shared	Comment
Traffic risk			✓	
Collection risk	✓			
Competition risk	✓			
Government payment risk	✓			
Environmental and social risk	✓			
Land acquisition risk		✓		
Permits	✓			
Geotechnical risk	✓			
Brownfield risk: inventory studies, property boundaries, project scope		✓		
Political risk	✓			
Foreign exchange risk	✓			

PPP = public–private partnership.

Source: Mott MacDonald.

1.2.4 Local Capabilities

Bangladesh as a country still lacks key skills in construction work. Local contractors generally have skills and experience to execute construction work only to locally acceptable standards. For a more complex type of construction, such as elevated roads or bridges, foreign contractors (from Japan, the Republic of Korea, the People's Republic of China, and Thailand) bring in the requisite experience and know-how to execute the work to internationally acceptable standards.

With regard to operation and maintenance (O&M) of road infrastructure, foreign firms generally execute the work to a higher standard than local companies.

There are also a few international (engineering) consultancy firms who could provide project management, risk management, and program management services.

1.2.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	1	1	-
PPP projects that received export credit agency/international financing institution support	1	1	-

1.2.6 Challenges

The Government of Bangladesh had initially decided to implement the Dhaka–Ashulia Elevated Expressway project under the PPP framework, and a notice was issued inviting tenders from investors by July 2011. The tender invitation, however, did not receive a positive response and the government decided to implement the project under a government-to-government agreement. Similarly, the Aminbazar-to-Azimpur Elevated Expressway was intended to be implemented as a PPP; however, a year after the transaction announcement, the project got mothballed.

The Dhaka Elevated Expressway PPP project contract was awarded to the preferred bidder in January 2011, and 2 years later in December 2013, the concession contract terms were renegotiated. However, the sponsor has yet to secure funding for the project and there have been delays in the implementation of the project. One of the key reasons why the Dhaka Elevated Expressway PPP project has yet to reach financial close, after nearly 3 years from contract award, is uncertainty in traffic forecast and reluctance of lenders to take the demand risk.

Challenges of PPP progress in the road sector are provided in Table 1.8.

Table 1.8: Challenges of PPP Progress in the Road Sector in Bangladesh

Challenges	Currently Implemented Tackling Measures
Risks due to uncertainty in ridership/users making the project not bankable	
Land acquisition delays due to decentralization of the process and objection of local residents, particularly in urban areas of high density	

PPP = public-private partnership.

Source: Mott MacDonald.

1.3 Railways

1.3.1 Regulatory Framework

1.3.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

1.3.1.2 Government Contracting Agency

The Ministry of Railways is the key contracting agency for rail projects.

1.3.1.3 Sector-Specific Regulations

	2016	2017
Does the private partner have a legal right to collect revenue?	✓	✓

The private party has a legal right to collect revenue from users, whether passenger or freight. The PPP concept for Bangladesh railways is still at an early development stage, there is no set precedence on the type of PPP contract and/or concession agreement.

1.3.1.4 Sector Regulators

The railway sector still lacks an independent regulator to perform checks and balances on the service standard, performance, safety, and tariff. The controlling and regulating role is carried out within the Ministry of Railways.

1.3.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

1.3.2 Institutional Capacity for Implementation

1.3.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	x	x

There is only one project (however, only indirectly relating to railways) listed as an approved project on the Bangladesh PPP Authority website. The project is estimated to be valued at \$200 million–\$500 million.

PPP pipeline of railway projects is provided in Table 1.9.

Table 1.9: PPP Pipeline of Railway Projects in Bangladesh

No.	Project Name	Length (km)	Value, (\$ million)	Suggested PPP Form	Lead Agency
1	Construction of a New Inland Container Depot near Dhirasram Railway Station	no data	200–500	no data	Bangladesh Railway

km = kilometer, PPP = public–private partnership.

Source: PPP Authority. *PPP Projects*. <http://www.pppo.gov.bd/projects.php> (accessed 20 February 2018).

1.3.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	1

1.3.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects currently in procurement	n/a	n/a	-

1.3.3 Features of Past PPP Projects

As of February 2018, there had been no PPP projects in the railway sector in Bangladesh.

1.3.4 Local Capabilities

Similar to the road sector, Bangladesh needs input from foreign contractors to help rebuild its rail infrastructure to an acceptable international standard. Bangladesh also lacks experienced local network and infrastructure operators.

1.3.5 Challenges

Challenges of PPP progress in the railway sector are provided in Table 1.10.

Table 1.10: Challenges of PPP Progress in the Railway Sector in Bangladesh

Challenges	Currently Implemented Tackling Measures
No sound PPP pipeline or planning document in this sector.	

PPP = public-private partnership.

Source: Mott MacDonald.

1.4 Ports

1.4.1 Regulatory Framework

1.4.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

The Foreign Private Investment (Promotion and Protection) Act of 1980 allows foreign direct investment with the public sector without any ownership restrictions.

Notwithstanding, government approval and decision on percentage of the foreign investor participation is required in certain “controlled” sectors, as discussed in section 1.1.1.9 of this report.

1.4.1.2 Government Contracting Agency

According to the Policy and Strategy for PPP (2010), it is the Cabinet Committee on Economic Affairs (CCEA) that gives the final approval for the development of a PPP project. The relevant state-owned port authorities, under the Ministry of Shipping (MOS), are capable of entering into the contract upon approval.

1.4.1.3 Sector-Specific Regulations

The MOS is responsible for formulating policies for Bangladesh’s maritime sector, which includes ports, inland water transport, national waterways, and ocean shipping.

1.4.1.4 Sector Regulators

Most Bangladesh imports and exports are handled through Chittagong Port, which has no private sector operator in its terminal operations. The Chittagong Port Authority, functioning under the control of the MOS, sets and regulates the tariffs for services and facilities offered at Chittagong Port. The Chittagong Port Authority Ordinance (1976) gives full financial and administrative autonomy to the Chittagong Port Authority. Similarly, Mongla Port Authority imposes and collects various fees at Mongla Port.

Tariffs for inland water transport are regulated by the government. The Department of Shipping is responsible for regulating inland water transport in parallel with the Bangladesh Inland Water Transport Authority on main routes, and the Bangladesh Inland Water Transport Corporation on secondary routes.

The Bangladesh Land Port Authority imposes various tariffs for services and facilities offered at all the landside ports throughout the country.

Details of port sector regulatory agencies in Bangladesh are provided in Table 1.11.

Table 1.11: Port Sector Regulatory Agencies in Bangladesh

Agency	Function
Department of Shipping	Issuance of survey and registration certificates for inland water transport vessels
Bangladesh Inland Water Transport Authority	Issuance of route permits for passenger vessels on primary routes Fixation of maximum and minimum fares and freight rates for inland water transport on behalf of the government Approval of timetables for passenger launch services Inspection of ships, cargo, and inland vessels to ensure compliance with the provision of ISO 1976

continued on next page

Table 1.11 *continued*

Agency	Function
	Acts as the competent authority of Bangladesh for the protocol on inland water transit and trade, looking after the use of waterways for trade and transit between Bangladesh and India
Bangladesh Inland Water Transport Corporation	Issuance of route permits for passenger vessels on secondary routes
Chittagong Port Authority	Management, maintenance, improvement, and development of the Chittagong Port Provision and maintenance of adequate and efficient port services and facilities in the port or the approaches to the port. Regulation and control of berthing and movement of vessels and navigation within the port.

Sources: CPA Ordinance, 1976. www.dpp.gov.bd/upload_file/gazettes/6672_27531.pdf; Bangladesh Inland Water Transport Authority. <http://www.biwta.gov.bd/>.

1.4.1.5 Standard Contracts

Information not available.

1.4.2 Institutional Capacity for Implementation

1.4.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The Seventh Five-Year Plan (2016–2020) identifies the general objectives up to 2020. The MOS has identified port and water transport as one of the prospective sectors under PPP. The PPP Authority lists the following projects in Table 1.12.

Table 1.12: PPP Pipeline of Maritime Projects in Bangladesh

No.	Project Name	Location	Value (\$ million)
1	Construction and operation of inland container terminal at Khanpur	Narayanganj	32
2	Third seaport development	Payra	no data

PPP = public–private partnership.

Source: PPP Authority. *PPP Projects*. <http://www.pppo.gov.bd/projects.php> (accessed 20 February 2018).

The third seaport in Bangladesh, listed in Table 14, is the Payra Seaport. It is noted that Phase 1 of the port development, which was funded by the government due to lack of private investment, has been constructed and limited operations are taking place. The government, however, plans to gradually turn the Payra Seaport into a deep-sea port and might decide to implement further development of the port under the PPP framework. No information is currently available in relation to this project on the PPP Authority website.

1.4.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	2

1.4.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	no data	no data	no data
Unsolicited bids	1	1	–
Competitive bidding process	1	1	–
PPP projects currently in procurement	n/a	n/a	1 ^a

Note:

^a Construction of Laldia Bulk Terminal.

1.4.3 Features of Past PPP Projects

1.4.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	1	1	–
PPP projects that reached financial close (\$ million)	no data	no data	–

There has been only one project so far—the management and lease contract for Chittagong Container Terminal (and limited information is available on the details of the project).

It is worth noting that in August 2016, the Mongla Port Jetty PPP project was awarded to private firm PowerPac Ports Limited, a subsidiary of the local Sikder Group. However, the financial close has not yet been reached.

1.4.3.2 Tariffs

	2016	2017
Does private sector have the freedom to set the tariff?	✓	✓

The government regulates tariffs. Terminal handling charges (THCs) are charges made by the terminal operators for container movement services performed at a terminal. For container terminals, THCs cover the movement of a container between the ship's hold to the exit-entry gate via the container terminal yard. Table 1.13 gives a general indication of the destination THCs for a full container load as charged by the relevant terminal operator, port authority, and/or shipping line.

Table 1.13: Typical Terminal Handling Charges in Bangladesh
(\$)

Designation	Company	Year	Terminal Handling Charge (\$)	
			TEU	FEU
Shipping Line	APL	2018	186	372
Shipping Line	MOL	2017	100	120
Port Authority	Chittagong Port Authority	2015	110	138

FEU = forty-foot equivalent unit, MOL = Mitsui O.S.K. Line, TEU = twenty-foot equivalent unit.

Note: Actual terminal handling charge may vary from port to port of each country, as the cost of handling depends on the contractual agreement between terminal operators and the relevant shipping line.

Sources:

APL. 2018. https://www.apl.com/wps/wcm/connect/a61c1c96-419d-492e-b67c-3f7c64c477ff/Surcharge_OB_IA.pdf?MOD=AJPERES; MOL. 2017; Asian Development Bank. Strategic Master Plan for Chittagong Port. 2015. <https://www.adb.org/sites/default/files/project-document/183636/45078-001-tacr-01-part-2.pdf>.

1.4.3.3 Risk Allocation

Information not available.

1.4.4 Local Capabilities

Bangladesh has three main commercial seaports: Chittagong, Mongla, and the newly constructed Payra Port. The World Bank reported that Chittagong, the largest and principal port in Bangladesh, handled over 1.47 million twenty-foot equivalent units (TEUs) of containerized cargo in 2012–2013. Management and port operations of the three ports in Bangladesh are conducted by the relevant port authorities; there are no private operators on these ports.

In Bangladesh, limited capacity exists for marine civil works. Bangladesh has an extensive network of natural rivers with inland ports. Thousands of smaller vessels transport passengers and cargo within the inland waterway network.

1.4.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	-	-	-
PPP projects that received export credit agency/international financing institution support	-	-	-

1.4.6 Challenges

Challenges of PPP progress in the port sector are provided in Table 1.14.

Table 1.14: Challenges of PPP Progress in the Port Sector in Bangladesh

Challenges	Currently Implemented Tackling Measures
Lack of implementation for prospective port projects	PPP Law (2015)—streamline the formulation and execution of PPP projects
Relationship between private operator and state-owned port authorities	Introduction of the landlord model for Chittagong Port Authority
Lack of commitment from government to privatize existing port facilities	
No policy/regulation on port charges	
Hinterland connections to ports	

PPP = public–private partnership.

Sources: Mott MacDonald; UNCTAD. 2013. *Investment Policy Review: Bangladesh*. United Nations Conference on Trade and Development. http://unctad.org/en/PublicationsLibrary/diaepcb2013d4_en.pdf.

1.5 Energy

1.5.1 Regulatory Framework

1.5.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Power generation	100%	100%
Power transmission	100%	100%
Power distribution	100%	100%
Oil and gas	100%	100%

It is understood that a company wholly or partially owned by foreign shareholders is subject to the same regulations, controls, and fees as a company owned by local shareholders. Enacted in 1980, the Foreign Private Investment Act accorded protection to foreign private investment. Notwithstanding, government approval and decision on percentage of the foreign investor participation is required in certain “controlled” sectors, as discussed in section 1.1.1.9 of this report.

Additionally, a number of facilities and incentives are provided to foreign investors, such as

- tax exemptions (including on royalties, foreign loans, capital gains from transfer of shares, and income tax for up to 3 years for expatriate personnel);
- remittance of up to 50% of salary of the foreigners employed in Bangladesh;
- no restriction on issuance of work permits related to foreign nationals and employees; and
- facilities for repatriation of invested capital, profit, and dividends.

A national authority was created in 2016, the Bangladesh Investment Development Authority (BIDA), to promote private investment in the country.

1.5.1.2 Government Contracting Agency

The Ministry of Power, Energy, and Mineral Resources has two main divisions:

- The Power Cell was created to implement power sector reform and to manage the electricity business.
- The Energy and Mineral Resources Division manages the energy sector and has two corporations:
 - The Bangladesh Oil, Gas and Mineral Corporation (PetroBangla), responsible for mining, developing, producing, and transporting natural gas and mineral resources; and
 - Bangladesh Petroleum Corporation, responsible for import, refining, marketing, transportation, and storage of oil.

The Bangladesh Power Development Board (BPDB) operates most publicly owned generators and urban distributors (except in Dhaka and West Zone); it acts as a single buyer, purchasing from public and private generators and selling to distributors. In addition, it conducts procurement processes for independent power producers (IPPs).

The Sustainable and Renewable Energy Development Agency is mandated with the task of promoting renewable energy. It acts as the state nodal agency for all renewable energy programs and projects in Bangladesh. It is responsible for promoting and approving all renewable energy projects, and also for developing an energy audit and administering activities related to energy efficiency and conservation.

1.5.1.3 Sector-Specific Regulations

To create flexibility in the energy sector, the Government of Bangladesh has adopted various models specific to the energy sector:

- The government created a special status for IPPs: these PPP plants have been particularly successful in providing new generation capacity. Usually, IPPs sell energy to utilities under a PPA with one of the public companies, either the BPDB or Power Grid Company of Bangladesh. As per the policies, such contracts benefit from sovereign guarantees.
- To meet Bangladesh's energy needs, a special type of project was also developed, quick rental power plants (or "rentals"). These are typically small, oil-fired power plants established as an emergency measure to cope with power shortages in the short term and to be used during peak demand periods in the long term. With the exception of several rentals, whose contracts last for a relatively long term of 15 years, most of the contracts are short term of 3–5 years. Power generated from rentals is purchased by BPDB under government initiatives. BPDB usually purchases the rental power at high cost (due to the short term of the rental contracts) and sells the power at the regulated bulk tariff with the negative margin incurred at BPDB being the cost of the policy implementation.

While there is a good level of activity in the power sector in Bangladesh and willingness to consider different delivery methods and incentives to the private sector to deliver a step change in energy supply, rentals would not be considered to be the type of projects currently developing as typical PPPs as they lack long-term performance obligations. However, for the purpose of this report, and because this type of project represents a significant aspect of the local context, it has been decided to keep track of it. Rental projects, therefore, are counted in the assessment of the energy sector.

In general, a license is required for any power generation and energy transmission, distribution, supply, and storage project. Licenses are issued by the Bangladesh Energy Regulatory Commission.

1.5.1.4 Sector Regulators

Details of energy sector regulatory agencies in Bangladesh are provided in Table 1.15.

Table 1.15: Energy Sector Regulatory Agencies in Bangladesh

Agency	Function
Bangladesh Energy Regulatory Commission (BERC)	The commission has the mandate to regulate electricity, gas, and petroleum products for the whole country. Among others, the BERC has authority over consumer protection, approval of tariffs and pricing, issuance of generation and distribution licenses, and promotion of competition. The BERC Act 2003 gives the commission a legal mandate for liberalization of the sector, which makes it a quasi-judicial authority.
Bangladesh Ministry of Power, Energy and Mineral Resources	The government is responsible for the overall planning and development of the energy sector, through the issuance of policy directives relating to energy.
Sustainable and Renewable Energy Development Agency	Responsible for all renewable energy sector regulation.

Sources: Mott MacDonald; www.berc.org.bd and www.mpemr.gov.bd.

1.5.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
Power purchase agreement	✓	✓
Capacity take-or-pay contract	no data	no data
Fuel supply agreement	✓	✓
Implementation agreement (government guarantee)	✓	✓
Transmission and use of system agreement	no data	no data
Engineering procurement and construction contract	no data	no data

1.5.2 Institutional Capacity for Implementation

1.5.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

Bangladesh recognizes the need to increase its power generation capacity, and the government committed to ensuring access to reliable electricity for all citizens by 2012 and to developing renewable energy. In 2008, the Renewable Energy Policy defined the target of 10% of renewable energy by 2020, corresponding to additional generation capacity of 2,000 megawatts (MW). The government has also set renewable energy development targets for several technologies for each year from 2015 to 2021, calling for an additional 3,100 MW of renewable energy capacity to be installed by 2021. Most of the new capacity planned is solar (1,676 MW or 54%) and wind (1,370 MW or 44%).

PPP pipeline of power generation projects is provided in Table 1.16.

Table 1.16: PPP Pipeline of Energy Projects in Bangladesh

No.	Project Name	Value (\$ million)
1	Construction of LPG import, storage, and bottling plant at Kumira	no data
2	Solar park at Sylhet, 5 MW	no data
3	Solar park at Panchagarh, 50 MW	no data
4	Solar park at Panchagarh, 30 MW	no data
5	Solar park at Lalmonirhat, 5 MW	no data
6	Solar park at Bagerhat, 100 MW	no data
7	Solar park at Manikganj, 35 MW	no data
8	Solar park at Tangail, 50 MW	no data
9	Solar park at Lalmonirhat, 100 MW	no data
10	Solar park at Panchagarh, 8 MW	no data
11	Solar rooftop (On-Grid) at Jamalpur, 0.81 MW	no data
12	Wind power project at Cox's Bazar, 60 MW	no data
13	Solar power plant at Regional Training Centre, Rajshahi, 1 MW	no data

continued on next page

Table 1.16 continued

No.	Project Name	Value (\$ million)
14	Grid-tied solar system at Chandpur, 500 kW	no data
15	Solar park at Karnafuli riverside, Rangunia, Chittagong, 60 MW	no data
16	Solar park adjacent to Bangabandhu Bridge, Tangail, and Sirajgonj area, 40–45 MW	no data
17	Solar park at Ishwardi, 2–3 MW	no data
18	Solar park at Jhenaidaha, 1–2 MW	no data
19	Wind power project at Parky Beach area, Anawara in Chittagong, 50–200 MW	no data
20	Wind power plant across the coastal regions of Bangladesh, 15 MW	no data

kW = kilowatt, LPG = liquefied petroleum gas, MW = megawatt, PPP = public–private partnership.

Source: PPP Authority. Sustainable and Renewable Energy Development Authority Database. http://www.sreda.gov.bd/index.php/ee_master_pdf.

1.5.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	no data

1.5.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	18	18	no data
Unsolicited bids	24	30	6
Competitive bidding process	17	17	no data
License scheme	1	1	no data
PPP projects currently in procurement	n/a	n/a	20

Currently, there are about 20 projects (mainly solar power plants) under various stages of procurement and negotiation with the bidders. These are mainly unsolicited proposals. The delays in contract signing have been reported because of land acquisition issues, as well as a few sponsors not being satisfied with some contract provisions in relation to governing law, arbitration, stamp duty on deeds of land acquisition, and 15 years of corporate tax exemption.

1.5.3 Features of Past PPP Projects

1.5.3.1 PPP Projects That Reached Financial Close

	1990–2016		1990–2017		In 2017	
	Number	\$ million	Number	\$ million	Number	\$ million
PPP projects that reached financial close	54	11,203	65	11,612	11	409
<i>Renewable energy generation:</i>						
Solar	1	no data	11	no data	10	no data
Solar/wind	-	-	-	-	-	-
Wind	-	-	-	-	-	-
Hydro	-	-	-	-	-	-
Geothermal	-	-	-	-	-	-
Waste/biomass	1	9	1	9	-	-
<i>Thermal energy generation:</i>						
Coal	3	3,149	3	3,149	-	-
Diesel	16	1,062	16	1,062	-	-
Natural gas	24	6,575	25	6,984	1	409
Others	9	408	9	408	-	-

In total, 65 projects have reached financial close from 2000 until 2017, of which 45 were IPPs or build-own-operate, and 20 were rentals. As stated in section 1.5.1.3, rentals were counted to provide a more realistic picture of the current situation in the energy sector.

1.5.3.2 Foreign Investor Participation

	1990–2016		1990–2017		In 2017	
	Number	Share of the total number of projects	Number	Share of the total number of projects	Number	Share of the total number of projects
PPP projects with foreign sponsor participation						
Renewables	1	50%	1	8%	-	-
Thermal	21	40%	22	42%	1	100%

1.5.3.3 Government Support

	1990–2016	1990–2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	no data
Government guarantees	22	22	-
Availability-/performance-based payment basis	54	65	11

1.5.3.4 State-Owned Enterprise Participation

	1990–2016		1990–2017		In 2017	
	Number	Share of the total number of projects	Number	Share of the total number of projects	Number	Share of the total number of projects
Institutional PPPs	2	4%	3	5%	1	9%

1.5.3.5 Payment Mechanism

	1990–2016	1990–2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	-	-	-
Government-paid contracts	54	65	11

1.5.3.6 Tariffs

	2016	2017
Is there a system of feed-in tariffs (FIT)?	x	x

Prices of electricity, gas, and petroleum in bulk and retail are determined by the Bangladesh Energy Regulatory Commission; the commission published a Power Pricing Framework in 2004 and tariff regulations. However, Bangladesh has not introduced a feed-in tariff (FIT) scheme; the policy tool is yet to come into force although the draft document has been done.

1.5.3.7 Risk Allocation

Information not available.

1.5.4 Local Capabilities

The energy sector is controlled by the government either through regulatory control or through state-owned companies. Power generation entities are partly corporatized, but natural gas entities are all state-owned entities. PetroBangla manages exploration, development, production, and sales of domestic natural gas and coal, and Bangladesh Petroleum Corporation manages oil. However, international oil companies are responsible for more than 50% of domestic gas production.

Power Generation Entities

- Ashuganj Power Station Company Limited, established in 2000, was started based on the transferred asset from the Bangladesh Power Development Board (BPDB). In 2015, it contributed 9% of the country's power generation.
- Electricity Generation Company of Bangladesh, established in 2004, contributed 7% of local power generation in 2015. It has attracted development partner funding from financial institutions such as Japan International Cooperation Agency (JICA), World Bank, and ADB.
- North-West Power Generation Company Limited, established in 2007, contributed 5% of power generation in Bangladesh.
- Coal Power Generation Company of Bangladesh Limited, established in 2011, is an executing agency of JICA.
- IPPs and quick rental plants have been introduced to support rapid growth in energy needs.

Other Key Players in the Energy Sector

- **Power Grid Company of Bangladesh**, a wholly owned subsidiary of the BPDB, operates the national transmission grid, schedules grid operations, and wheels energy to distributors.
- **Dhaka Electric Supply Company Limited** is a public company that provides power supply services.
- **Bangladesh Rural Electrification Board** was established in 1977 to monitor electrification projects and facilitate socioeconomic development and improve agriculture in rural areas of Bangladesh.
- **Infrastructure Development Company Limited** is a state-owned nonbanking financial institution that administers financing for rural energy and renewable energy development projects (mainly solar home systems and biogas) with 15 participating national nongovernment organizations (NGOs). The company has a long list of projects financed by development partners such as JICA, the World Bank, and ADB, among others.

1.5.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	14	15	1
PPP projects that received export credit agency/international financing institution support	14	15	1

Through a local consultative group, ADB is coordinating all international donors' activities in the energy sector.

World Bank has initiated the Rural Electrification and Renewable Energy Development program and has signed a \$15 million grant agreement with the government to increase access to clean energy in rural areas. Similarly, JICA and the United States Agency for International Development are supporting rural electrification programs in Bangladesh.

1.5.6 Challenges

Challenges of PPP progress in the energy sector are provided in Table 1.17.

Table 1.17: Challenges of PPP Progress in the Energy Sector in Bangladesh

Challenges	Currently Implemented Tackling Measures
Inadequate tariff levels and insufficient regulation	The Bangladesh Energy Regulatory Commission has been receiving assistance from multilateral agencies to carry out its mandate. The government is focusing on reforming the regulatory framework to facilitate development of new projects.
Institutional weakness	Reform of energy sector institutions is starting to show results with corporatization of state-owned operating entities such as Dhaka Electric Supply Company Limited and Electricity Generation Company of Bangladesh, and by empowering the Bangladesh Power Development Board.
Despite the government commitment, there have been utility-scale solar PV projects delivered in Bangladesh. A number of unsolicited proposals for grid-tied solar power totaling around 500 MW were received by the power division over the past few years, but none of the projects awarded are expected to become operational anytime soon due to difficulties experienced by the private sector in obtaining land and the inexperience of some of the companies involved.	

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Table 1.17 *continued*

Challenges	Currently Implemented Tackling Measures
About 15 MW of power is generated by solar rooftop PV systems that have been installed in the main cities as a result of a government requirement for a certain percentage of lighting loads to be met by solar power for getting a new grid connection. However, most of these panels were installed to comply with the requirement to get a new grid connection, and there were inadequate quality control and monitoring to ensure that quality panels were installed. As a result, most of these rooftop solar PV systems produce little or no energy.	
Procurement and governance. Only a small number of players with close connections with the government make it to the final stages of the bidding processes. This could be the sign of limited transparency. Recently, the Bangladesh Power Development Board procurement process was tainted with corruption allegations.	

MW = megawatt, PPP = public-private partnership, PV = photovoltaic.

Source: Mott MacDonald.

1.6 Water and Wastewater

1.6.1 Regulatory Framework

1.6.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Bulk water supply and treatment	100%	100%
Water distribution	100%	100%
Wastewater treatment	100%	100%
Wastewater collection	100%	100%

1.6.1.2 Government Contracting Agency

Various agencies, including the Water Supply and Sewerage Authority.

1.6.1.3 Sector-Specific Regulations

	2016	2017
Can the private sector be given water abstraction rights?	✓	✓
Are there regulations in place on raw water extraction?	✓	✓
Are there regulations in place on the release of treated effluents?	✓	✓

The application process for raw water extraction is provided by the Ministry of Water Resources as per Bangladesh Water Rules (2015) under the Bangladesh Water Act (2013).

Wastewater treated effluent discharge regulations are detailed in Schedule 9 and Schedule 10 of the Environmental Conservation Rules; however, this regulation was created in 1997 and is expected to be outdated.

1.6.1.4 Sector Regulators

Details of water sector regulatory agencies in Bangladesh are provided in Table 1.18.

Table 1.18: Water Sector Regulatory Agencies in Bangladesh

Agency	Function
Water Supply and Sewerage Authority (WASA)	<p>The most significant public authorities responsible for the management and provision of water and sewage services are Dhaka WASA and Chittagong WASA.</p> <p>In other conurbations, this authority is delegated to the local municipality office.</p> <p>The scope of authority includes</p> <ul style="list-style-type: none"> • construction, operation, improvement, and maintenance of the necessary infrastructure for collecting, treating, preserving, and supplying potable water to the public, industries, and commercial concerns; and • construction, operation, improvement, and maintenance of the necessary infrastructure for collecting, treating, and disposing of domestic sewage.
National Water Resource Council	Responsible for coordinating all aspects of water management and issues directives through its executive committee
Water Resources Planning Organization (WARPO)	Responsible for preparing the National Waste Management Plan and subsequent updates and monitoring implementation

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Table 1.18 *continued*

Agency	Function
Department of Environment	Enforcement of environmental legislation including wastewater discharge
Bangladesh Water Development Board	Development of knowledge and capability that will enable the country to design future water resources management plans

Source: Mott MacDonald.

1.6.1.5 Standard Contracts

Standard agreements for PPP procurement are not yet in place. The International Federation of Consulting Engineers (FIDIC) suite of contracts has been regularly used by international development banks for procurement of infrastructure and is well understood in the local market.

1.6.2 Institutional Capacity for Implementation

1.6.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

- The PPP project pipeline is published on the PPP Authority website.
- The Policy and Strategy for PPP (2010) names water supply and distribution, sewerage and drainage, and effluent treatment plans as priority sectors. However, it does not give details of the strategy for water and wastewater.
- The National Water Management Plan (2004) details the water resource management strategy until 2025; however, no update has been provided since 2004.

There are currently no identified projects in the PPP pipeline of water projects.

1.6.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

1.6.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects currently in procurement	n/a	n/a	1

The PPP project, which is currently under procurement, aims to provide an installation of water supply, sewerage, drainage system, and solid waste management system in Purbachal New Town.

1.6.3 Features of Past PPP Projects

As of February 2018, there were no PPP projects in the water sector in Bangladesh.

1.6.3.1 Tariffs

The tariff system for Chittagong is shown in Table 1.19.

Table 1.19: Chittagong Water Supply and Sewerage Authority

Category	Tariff Rate (\$/m ³)
Domestic	0.09
Nondomestic	0.27

m³ = cubic meter.

Source: Water Supply and Sewerage Authority. 2016.

Any revision to the tariff rates generally requires the prior approval of the government. However, Clause 22 of the Water Supply and Sewerage Authority Act 1996 permits water supply and sewerage authorities to increase the tariff at a rate of 5% per fiscal year, in certain specific circumstances.

1.6.4 Nonrevenue Water and Infiltration

	2016	2017
Nonrevenue water (%)	22.78	21.39
Nonrevenue water (m ³ /km/day)	72.32	110.81
Infiltration	no data	no data

km = kilometer, m³ = cubic meter.

Source: IBNET. 2016. *IBNET Database*. <https://database.ib-net.org/DefaultNew.aspx> (accessed 9 February 2018).

1.6.5 Local Capabilities

The lack of previous experience in water PPP projects means there is not enough local experience in this type of design and construction. It is expected that there would be significant requirement to import project management and equipment. Several regional and international players have business operations in Bangladesh.

1.6.6 Challenges

Challenges of PPP progress in the water sector are shown in Table 1.20.

Table 1.20: Challenges of PPP Progress in the Water Sector in Bangladesh

Challenges	Currently Implemented Tackling Measures
Dhaka WASA and Chittagong WASA currently have both financial and human resource constraints arising from ongoing services and projects, thus limiting their capacity to engage in PPP project development.	
Despite the relative abundance of water throughout Bangladesh and its conurbations, the abnormally high population densities result in severe stress on water resources from pollution and overabstraction. Therefore, identifying water resources suitable for abstraction is very challenging.	
There are over 40 different agencies, organizations, and categories of organizations involved in the water sector, which means that the private sector is required to manage multiple stakeholders.	
Low water tariff. True cost-recovery is not yet practiced.	
Investor returns may be constrained from managing the significant raw water pollution risks (including groundwater pollution with arsenic and surface water polluted with sewage and industrial pollution), which result in affordability issues arising from more expensive treatment requirements, or the high risk of standards not being achieved with only basic treatment.	

PPP = public-private partnership, WASA = Water Supply and Sewerage Authority.

Source: Mott MacDonald.

1.7 Social Infrastructure

1.7.1 Regulatory Framework

1.7.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Healthcare infrastructure	100%	100%
Healthcare services	100%	100%
Education infrastructure	100%	100%
Education services	100%	100%
Government buildings	100%	100%
Prisons and correction centers	100%	100%
Social housing	100%	100%

There is no limitation pertaining to equity participation, that is, 100% foreign equity is allowed for both health and education sectors.

1.7.1.2 Government Contracting Agency

For the healthcare sector, the government or public sector is the first key actor which, by the constitution, is responsible for the policy and regulation, and also for the provision of comprehensive health services, including financing and employment of health staff.

- The Ministry of Health and Family Welfare, through the Directorate General of Health Services and the Directorate General of Family Planning, manages a dual system of general health and family planning services through district hospitals.
- In addition, the Ministry of Local Government, Rural Development and Cooperatives manages the provision of urban primary care services. It is worth noting that although the Ministry of Health is the leading agency for institution-based healthcare delivery at the national level and in rural areas, primary healthcare in urban areas is the responsibility of respective local government institutions (municipalities and city corporations), which are under the Ministry of Local Government, Rural Development, and Cooperatives. The quality of services at these facilities, however, is quite low, mainly due to insufficient resources, institutional limitations, and absenteeism or negligence of providers.

Regarding the education sector, the Ministry of Primary and Mass Education is responsible for primary education (grades 1–5), and the Ministry of Education oversees secondary and post-secondary education.

1.7.1.3 Sector-Specific Regulations

	2016	2017
Can the private sector be given rights to provide education services?	✓	✓
Can the private sector be given rights to provide healthcare services?	✓	✓

1.7.1.4 Sector Regulators

Social infrastructure sector regulatory agencies in Bangladesh are provided in Table 1.21.

Table 1.21: Social Infrastructure Sector Regulatory Agencies in Bangladesh

Agency	Function
Ministry of Health and Family Welfare	Sets standards
Directorate General of Health Services	Licenses health facilities to function Licenses the administration of controlled medicines Approves nonmedical and non-nursing healthcare training institutions Sets standard operating procedures for the operation of laboratory and diagnostic centers
Directorate General of Family Planning	Licenses the administration of controlled family planning methods
Ministry of Education	Formulates policies and programs for the development of post-primary to higher education, including <i>madrasah</i> (religious system of education), and technical and vocational education Formulates laws, rules, and regulations for the management and administration of post-primary education sector and its institutions in the country
Ministry of Primary and Mass Education	Formulates policies and programs for the development of primary education

Source: Mott MacDonald.

1.7.1.5 Standard contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Performance-based operation and maintenance contract	✓	✓
Engineering procurement and construction contract	✓	✓

1.7.2 Institutional Capacity for Implementation

1.7.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

In 2010, Bangladesh issued the National Education Policy to set the sector priorities. However, even though the size of the budget has gradually increased over the years in Bangladesh, the share of education in the overall budget has decreased; where the United Nations Educational, Scientific and Cultural Organization (UNESCO) stipulates that the budgetary allocation for education should constitute at least 6% of gross domestic product (GDP) or 20% of the total budget, the government spends only 2% of GDP for education.

In parallel with the National Five-Year Plan, the Ministry of Health and Family Welfare prepares a strategic investment plan, which sets out the sector's strategic priorities and defines an overall strategic framework to guide investments in the health sector. The strategic investment plan is intended to provide the basis for policy implementation plan preparation and health sector investments over the next 5 years.

The PPP Authority website advertised 32 PPP projects in the social infrastructure sector. These included education, health, social housing, economic zones, textile, and tourism projects.

Focusing on the projects that would typically be categorized as PPP projects based on international standards, there are 17 projects, of which five have reached financial close, listed on the PPP Authority website. Seven other projects are currently under procurement or are about to be signed. The five projects in the pipeline are shown in Table 1.22.

Table 1.22: PPP Pipeline of Social Infrastructure Projects in Bangladesh

No.	Project Name	Location	Capacity	Value (\$ million)
1	Development of economic zone at Jamalpur with private sector participation	Jamalpur	no data	210–250
2	Medical college and nursing institute and modernization of railway hospital of Kamalapur	Kamalapur	50 seats; 250 beds	80–200
3	Medical college and modernization of railway hospital at Saidpur in Nilphamary	Saidpur	50 seats; 250 beds	30–80
4	Medical college and modernization of railway hospital at Paksey in Pabna	Paksey	50 seats; 250 beds	30–80
5	New modern medical college and hospital of 250 beds on the unused land in Khulna	Khulna	50 seats; 250 beds	80–100

PPP = public-private partnership.

Source: PPP Authority. *PPP Projects*. <http://www.pppo.gov.bd/projects.php> (accessed 20 February 2018).

1.7.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	5

1.7.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	no data	no data	no data
Unsolicited bids	no data	no data	no data
Competitive bidding process	no data	no data	no data
PPP projects currently in procurement	n/a	n/a	7

1.7.3 Features of Past PPP Projects

1.7.3.1 PPP Projects That Have Reached Financial Close

	1990–2016		1990–2017		In 2017	
	Number	\$ million	Number	\$ million	Number	\$ million
PPP projects that reached financial close						
Healthcare	2	<6	3	<6	1	<6
Education	-	-	-	-	-	-
Others	1	no data	2	40–70	1	40–70

The International Finance Corporation and the Government of Bangladesh launched a pilot PPP in two existing dialysis centers in government hospitals: the National Institute of Kidney Disease in Dhaka and the Chittagong Medical College in Chittagong. This pioneering PPP is the first of its kind in the country's health sector. The private partner will finance, refurbish, and install 110 machines at these facilities—a 13% increase in the number of dialysis machines in the country. Apart from this, the private partner will staff, operate, and maintain the facilities for a period of 10 years.

1.7.3.2 Foreign Investor Participation

	1990–2016	1990–2017	In 2017
PPP projects with foreign sponsor participation (number)	3	4	1
PPP projects with foreign sponsor participation (as a share to the total number of social infrastructure PPP projects)	100%	80%	50%

Note: This information may be incomplete, as investor participation information could not be found for some of the PPP projects.

1.7.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	no data
Government guarantees	no data	no data	no data
Availability-/performance-based payment basis	no data	no data	no data

1.7.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	no data	no data	no data
Government-paid contracts	no data	no data	no data

1.7.3.5 Tariffs

Information not available.

1.7.3.6 Risk Allocation

Information not available.

1.7.4 Local Capabilities

1.7.4.1 Health Sector

To complement the government's limited capacity and resources to provide basic health services, and in response to low quality of public services, the private sector and NGOs have established a network of facilities.

- The private sector consists of the formal sector, which provides both modern and traditional (Unani and Ayurvedic) services through a range of facilities from hospitals to clinics, laboratories, and drugstores. The informal sector consists largely of untrained providers of modern, homeopathic, and traditional (kobiraj) medicine. However, private services are poorly regulated. The formal sector is concentrated in urban areas, and the informal sector is the principal provider in rural areas.
- A large NGO sector has emerged as the “third sector” of health providers in Bangladesh.

1.7.3.4 Education Sector

The educational system in Bangladesh is three-tiered and highly subsidized; the government operates many schools, at all levels, but also subsidizes parts of the funding of many private schools. The government has put more emphasis on vocational and technical education in the new National Education Policy (2010) to meet the local skill requirement. Currently, the educational system has three major streams: general, technical–vocational, and *madrasah* (religious system of education).

In addition, Bangladesh has developed a nonformal primary education system, mostly established by NGOs. The government has prioritized nonformal education to eradicate mass illiteracy and to enable continuing education.

1.7.3.5 Challenges

Challenges of PPP implementation in the social infrastructure sector are presented in Table 1.23.

Table 1.23: Challenges of PPP Progress in the Social Infrastructure Sector of Bangladesh

Challenges	Currently Implemented Tackling Measures
<p>There is a lack of efficiency control in health services. The Bangladesh public health system remains highly centralized, with planning undertaken by the Ministry of Health and Family Welfare and little authority delegated to local levels. However, the health information system suffers from the bifurcation of the ministry into the Directorate General of Health Services and the Directorate General of Family Planning, with separate and distinct reporting systems for each directorate general.</p> <p>Similarly, while there exist a number of acts and ordinances to regulate the health system, many of these legal instruments date from several decades ago. Separate councils for the registration and licensing of medical practitioners, dentists, and nurses have been established, but their authority to investigate or discipline providers is weak.</p>	

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Table 1.23 *continued*

Challenges	Currently Implemented Tackling Measures
Low government spending on education as a share of the gross domestic product. Currently, it is around 2%, the second lowest in South Asia, lower than in most other countries at similar levels of development. This would result in potential inability to provide adequate payment to potential investors.	
The absence of robust performance standards for institutions and articulation of competencies for students pave the way for large variations in performance across schools. Incentives for good performance are nonexistent or minimal, rendering good policies ineffective. In addition, education in Bangladesh is provided by a large number of private and nongovernment organization institutions. There is clear regulation regarding these institutions, making planning and implementation of sector-wide development strategies challenging.	
Limited interface between the subsectors: Two different ministries administer subsectors which face challenges in the management of the different education subsectors. For example, the various education departments of the two ministries have their own education management information systems, and the reliability and compatibility of data become a central question in the developing the sector.	

Source: Mott MacDonald.

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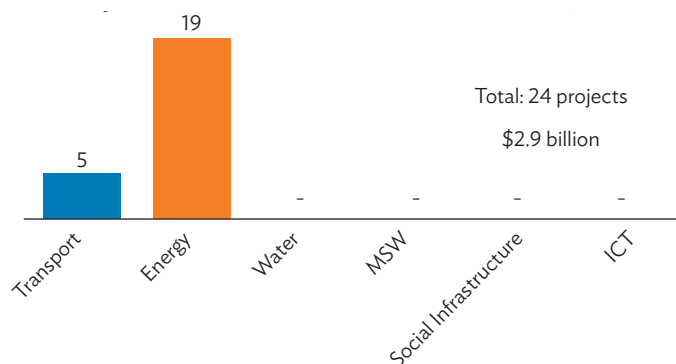
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2. GEORGIA

Georgia¹ is still in the beginning of its journey of the public–private partnership (PPP) development. Since 1990, there have been 24 PPP projects with a total investment of \$2.9 billion that have reached financial close (Figure 2.1), with the majority being in the renewable energy generation sector, particularly hydropower.

Figure 2.1: PPP Projects in Georgia that Have Reached Financial Close, 1990–2017



ICT = information and communication technology, MSW = municipal solid waste.

Sources: IJGlobal. *IJGlobal Project Finance and Infrastructure Journal*. <http://www.ijglobal.com>; World Bank Group. 2017. *World Bank Private Participation in Infrastructure (PPI) Database*. <http://ppi.worldbank.org/> (accessed 15 February 2018); Ministry of Energy of Georgia. 2017. *List of Ongoing Renewable Investment Projects in Georgia*. (29.12.2017). <http://www.energy.gov.ge/projects/pdf/pages/Ongoing%20Investment%20Projects%201810%20eng.pdf>.

Currently, there is no sound legal framework regulating the specifics of PPP project implementation and delivery. The operational 1994 Concession Law has a lot of limitations in relation to scope of application (definition of concession and sector of application), unclear definition of contracting entity, and very limited provisions regarding the selection procedures of the concessionaire. The regulations are silent on many aspects which typically would be governed by the PPP law based on good practice, including government support mechanisms, lender's security rights, termination, and compensation provisions.

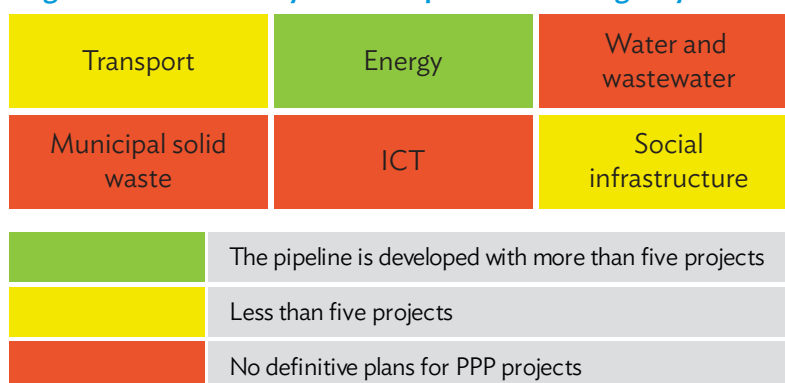
¹ The *PPP Monitor* is envisaged to be a dynamic product and comments for improving data quality are welcome and can be incorporated in future editions. It should also be noted that the report is using standardized definitions which may not match a particular developing member country's definitions. For the meaning of each indicator, please refer to the Appendix.

Moreover, the implementation of the majority of PPP projects (mainly in the energy sector) has not been governed by the Concession Law, but rather by a separate government decree specific to the renewable energy sector projects. Most importantly, contractual matters have been negotiated on a case-by-case basis at an individual PPP contract level.

Similarly, the institutional capacity of the country to implement PPP projects appears to be limited, due to the absence of key guidance and methodologies for the identification, preparation, and procurement of PPP projects.

The only solid PPP pipeline has been developed by the Ministry of Energy for the energy generation PPP projects in the renewables sector (Figure 2.2).

Figure 2.2: Availability of PPP Pipelines in Georgia by Sector

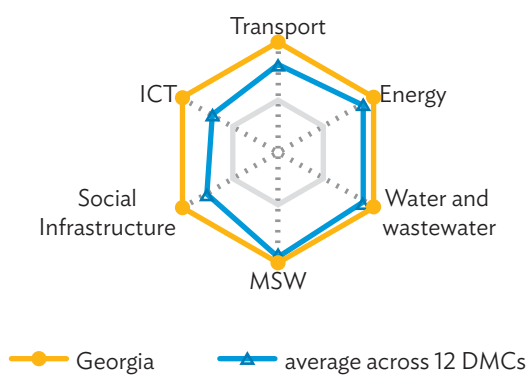


ICT = information and communication technology, PPP = public-private partnership.

Note: The projects included are published in the official sources.

Source: Mott MacDonald.

Figure 2.3: Maximum Allowed Foreign Ownership of Equity in Greenfield PPP Projects in Georgia



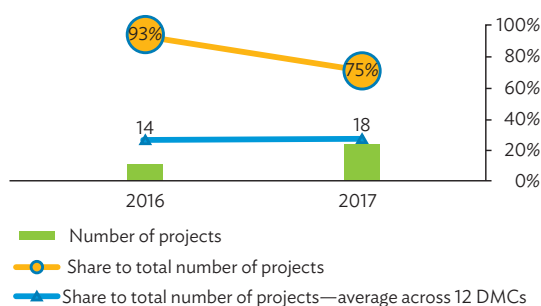
DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

The positive side of the regulatory framework includes the relative openness of the country to foreign investors, granting the right to invest in almost any sector (typical for PPP projects) without any limitations. Also, in many aspects, foreign investors enjoy the same rights in Georgia as local companies.

These favorable conditions were reflected in the high overall share (75%) of PPP projects with foreign investor participation over 1990–2017, exceeding the regional average of 31% by large (Figure 2.4). All transport PPP projects and all major hydropower projects have been implemented with foreign investors as sponsors (Figure 2.5).

Figure 2.4: PPP Projects in Georgia with Foreign Sponsor Participation, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public–private partnership, n/a = not applicable.

Source: Mott MacDonald.

Figure 2.5: Share of PPP Projects in Georgia with Foreign Sponsor Participation by Sector, 1990–2017

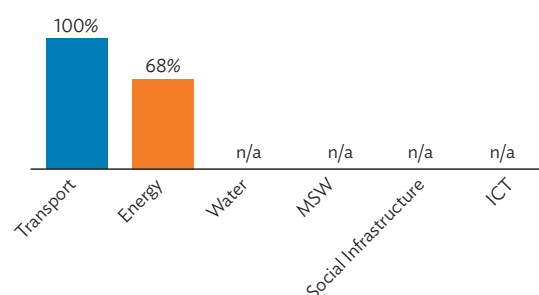
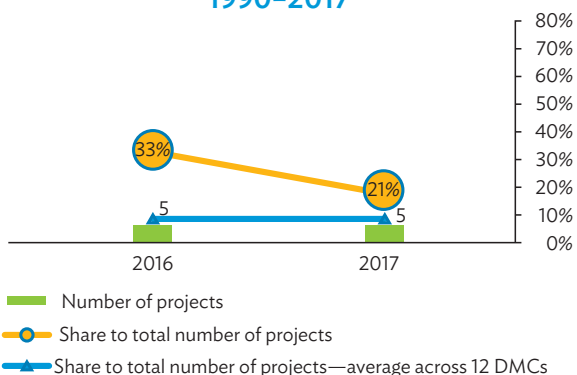


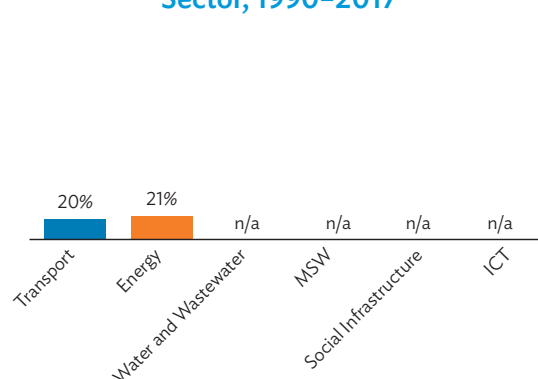
Figure 2.6: PPP Projects in Georgia with Export Credit Agency/International Financing Institution Finance Support, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public–private partnership, n/a = not applicable.

Source: Mott MacDonald.

Figure 2.7: Share of PPP Projects in Georgia with Export Credit Agency/International Financing Institution Finance Support by Sector, 1990–2017



However, lenders' concerns about an underdeveloped regulatory framework transpire in the fact that all major infrastructure projects have been realized with the financing support of international financing institution (IFI)s/export credit agency (ECA), without participation of commercial lenders.

In addition, a 100% state-owned JSC Partnership Fund, created in 2011, promotes investment in Georgia by providing cofinancing (e.g., equity, mezzanine) in projects at their initial stage of development via special purpose vehicles. The main areas of investment for the fund are power generation, agriculture, real estate, and manufacturing. Some of the projects are the Gardabani Thermal Power Plant (TPP), Nenskra Hydroelectric Power Plant (HPP), and Kasleti 2 HPP.

Key Developments from 2016

The Government of Georgia has been pushing to establish modern legal and institutional framework for PPPs since 2015. From 2016, the following steps have been taken:

- The government approved its program for the years 2016–2020, where the specific emphases are made on developing and promoting PPP projects in multiple sectors of public service, including healthcare and education.
- Furthermore, the government approved the Policy Document on Public-Private Partnerships (or the Policy Document) on 6 June 2016, which provides a different regime from the existing Concession Law and serves as a guideline for the new PPP/concessions law. As per the policy, reforms shall entail the development of a modern legislative and institutional framework for PPPs. In terms of the status of the policy, it serves as a guideline for the PPP law; current regulations provided in the policy are not binding for any existing PPP project or party.
- On 12 April 2017, after negotiations with the government, the Executive Board of the International Monetary Fund (IMF) approved a 3-year extended arrangement under the Extended Fund Facility for Georgia to support the authorities' economic reform program which covers PPP reform. According to the Memorandum of Economic and Financial Policies, Georgia assumed its obligation to submit a new PPP law to Parliament in 2017. Pending approval of the law, the government authorities have to refrain from signing any PPPs and purchasing power agreements, except for a limited number in the energy sector subject to a comprehensive fiscal risk assessment of liabilities. The IMF urged the Georgian authorities to give a strong role to the Ministry of Finance in reviewing value for money and budget affordability, ensuring a competitive tender process, and reporting PPP liabilities in line with international accounting standards.²
- On 28 September 2017, the Draft PPP Law was presented to the Parliament of Georgia together with the package on changes to the subordinate legislation, including changes in the Law of Georgia on State Property, Public Procurement Law, Investment and State Guarantees Law, and the Administrative Code. The draft was intended to come into effect in July 2018.³

² IMF Country Report No. 17/97.

³ Since the Draft PPP Law has not come into force yet, any commentary in relation to the Draft PPP Law provisions are presented in *italics* in this Chapter.

- In March 2017, according to the Policy Document under the Ministry of Finance, the Fiscal Risk Management Unit was established. The functions of the Fiscal Risk Management Unit include, among others, performance of fiscal risk analyses, evaluation and preparation of conclusion regarding the presented projects/regulations, elaboration of recommendations related to presented projects/regulations in order to eliminate the fiscal risks, collection of financial information for state-owned companies and identification of conditional liabilities and evaluation of such obligations, and identification and evaluation of fiscal risks of conditional liabilities of the state.

2.1 Country Profile

2.1.1 Regulatory Framework

2.1.1.1 PPP Law

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	x	x

	1990–2016	1990–2017	In 2017
Number of PPP projects that reached financial close under the latest PPP law	n/a	n/a	n/a

Note: No dedicated PPP law exists in Georgia.

Currently, there is no sound legal framework regulating the specifics of PPP project implementation and delivery. Instead, there are a number of laws, which in the absence of the dedicated PPP law, govern to some extent certain aspects of PPP procurement. These include the following:

- Law of Georgia on the Procedure for Granting Concessions to Foreign Countries and Companies (adopted in 1994), or “the Concession Law.” This Concession Law has many limitations: scope of application (concessions are defined as “long-term leasing agreements” and seem to be limited to natural resources and related activities), unclear definition of contracting entity, and very limited provisions regarding the selection procedures of the concessionaire;
- Constitution of Georgia;
- Civil Code of Georgia (1997);
- Law of Georgia on Support and Warranties of Investment Activity No. 473-Is dated 12 November 1996;
- Law of Georgia on State Support of Investments No. 3424-Is dated 1 August 2006; and
- Law of Georgia on State Procurement N1388-Is dated 20 April 2005.

The majority of PPP projects implemented so far have been governed by the government resolutions adopted on a case-by-case basis. For example, in the energy sector, the Government of Georgia approved Resolution No. 214 of 21 August 2013, which sets up the rules for expression of interest for technical and economic feasibility studies, building, owning, and operation of electricity-generating plants in Georgia.

Recently, the government repeatedly expressed its willingness to develop PPP in Georgia by adopting the PPP Policy Document on 6 June 2016. The Policy Document explains the background of the application of the PPP concept in Georgia and the need for further development, and provides an explanation of the models of PPP, the main principles of such cooperation, and the means of state support for such projects. According to the Policy Document, PPP projects will be implemented according to the predefined procedures, including the stage of project initiation, preparation of project, bidding procedures, or making direct agreements.

The draft law of Georgia on Public–Private Partnerships (or the Draft PPP Law), elaborated on the basis of the Policy Document, was presented to the Parliament of Georgia on 27 September 2017 and was planned to be adopted by July 2018. It is promised that the Draft PPP law will not have retroactive effect on the existing PPP projects and amendments. As for the PPP projects which are being prepared before adoption of the new law, in particular, if procedures of tender or expression of interest are started or the private party is selected, such projects will be presented to the Government of Georgia for determination of the stage of the particular project as per the new law.

2.1.1.2 PPP Types

	2016	2017
Number of PPP types defined in the PPP regulations	1	1

The Concession Law only assumes one form of arrangement: concession, which is defined as a long-term leasing agreement made between the state and a concessionaire for the purpose of making foreign investments, exploitation of recoverable and non-recoverable natural resources, and doing business.

However, the build–operate–transfer model and its variations (e.g., build–operate–own) have been applied in the hydropower, ports, and airports sectors.

According to the Policy Document, the PPP projects can be undertaken through any PPP model, including concessions. It is stipulated that the PPP legislation might establish certain carve-outs for specific PPP models. Otherwise, the PPP Law will treat all PPP models, including concessions, on an equal basis.

As per the Draft PPP Law, PPP means long-term cooperation between the public partner and private partner for the execution of works and/or the provision of services, that meets the criteria set out in the law and is implemented in the form of a concession or non-concession PPP. The Draft PPP Law provides specific PPP types, including concessions, non-concession PPPs, and institutional PPPs.

2.1.1.3 Eligible Sectors

	2016	2017		2016	2017
Transport			Energy		
Roads	✓	✓	Power generation	✓	✓
Railways	✓	✓	Power transmission	n/a	n/a
Ports	✓	✓	Power distribution	n/a	n/a
Airports	✓	✓	Oil and gas	✓	✓
Water and wastewater	✓	✓	Information and communication technology	✓	✓
Municipal solid waste	✓	✓	Social infrastructure	✓	✓

The sphere of application of the Concession Law is limited to the natural resources sector. However, in the past, PPP projects have been developed in the ports, airports, and energy generation sectors.

The Policy Document has ruled that the government may use PPP mechanisms in Georgia in respect of all sectors of public infrastructure and services. The PPP legislation may define the sectors and/or areas that will not fall under the PPP purview, as well as spell out priority areas for the country.

According to the Policy Document, the government believes that the sectors where PPP has the most potential are

- transport (including roads, bridges and tunnels, airports, ports, and rail);
- social infrastructure (including healthcare, education, and kindergartens);
- utilities (including water supply, heating, waste, energy, and renewables); and
- other sectors (including correctional facilities, tourism, sports infrastructure, information technology, and agriculture).

According to the Draft PPP Law, PPPs are allowed to be implemented in any sector of public infrastructure and service, unless otherwise determined by the Government of Georgia. Furthermore, it is stipulated that the Government of Georgia may determine priority sectors of PPPs in Georgia by its legal act.

2.1.1.4 Other Applicable Restrictions

	2016	2017
Project funding structure	none	none
Project capital investment size	none	none

The current Concession Law and Policy Document are silent regarding restrictions on project funding structure or project capital investment size.

As for the Draft PPP Law, the Government of Georgia shall approve “Resolution of Government of Georgia on Elaboration and Implementation Rules of Public-Private Partnerships” (or the Governmental Decree), which shall set minimum threshold of public-private project value. Minimum threshold of project value is one of five criteria for the project to qualify as PPP. Furthermore, the Draft PPP Law regulates minor PPP projects which meet the PPP criteria safe for the threshold, as defined by the Governmental Decree.

2.1.1.5 Unsolicited Bids

	2016	2017
Acceptance of unsolicited proposals	✓	✓
Eligibility of the project proponent to have:		
Competitive advantage at bid evaluation	×	×
Swiss challenge	×	×
Compensation of the project development cost	×	×
Government support for land acquisition and resettlement cost	×	×
Government support in the form of viability gap fund and guarantees	×	×

Based on past evidence, unsolicited projects are accepted, particularly in the energy sector, and are governed by the Order N40 by the Minister of Energy on approval of the terms and conditions for submission and review of the proposals about technical and economic feasibility study, construction, ownership, and operation of those hydropower plants to the Ministry of Energy of Georgia, which are not included in the List of Potential Power Plants in Georgia, adopted on 10 April 2017. This rule also includes mandatory provision of memorandum of understanding executed on the basis of this order, to sell 20% of the full annual power generation of the facility on internal market, for the first 10 years of operation, annually, during the period agreed under the memorandum.

According to the Policy Document, respective line ministries shall conduct evaluation of the unsolicited proposals submitted by the private sector. The PPP Unit, established as per the PPP Law, shall assist the line ministries in the evaluation of unsolicited proposals approved by the line ministries.

According to the Draft PPP Law, an unsolicited proposal is a proposal to implement a concession, submitted by a private initiator upon its own initiative to the relevant line ministry, in the sectors determined by the Government of Georgia in accordance with the Governmental Decree (to be adopted before 1 July 2018). The procedure for approval and decision on the PPP shall be identical for both the PPP identified through the unsolicited proposal and/or by the competent body. If, as the result of the proceedings, it is resolved that a PPP agreement shall be entered into with a

concessionaire other than the private initiator or its subsidiary company or institutional PPP company with its participation, then the winning bidder shall compensate the private initiator for reasonable, justified, and properly documented direct costs incurred in connection with the development and submission of unsolicited proposal, announced at the stage of tender, in any event not exceeding a threshold established by the Governmental Decree.

2.1.1.6 Institutional PPPs

	2016	2017	
Are institutional PPP arrangements allowed (e.g., joint venture between government or state-owned enterprises and private firms as a special purpose vehicle company)?	✓	✓	
	1990–2016	1990–2017	In 2017
Institutional PPP projects (number)	2	2	-
Institutional PPP projects (as a share to the total number of PPP projects)	13%	8%	-

The general regulations and the Policy Document are silent on this topic, although some hydropower PPP projects have been developed as joint ventures with participation of government financial institutions, such as the Partnership Fund and the Georgian Energy Development Fund.

The Draft PPP Law explicitly allows institutional PPPs and provides the same rules for the private partner in institutional PPP as it is stipulated for concessionaire or contractor. Additional requirements for the institutional PPP company will be set out in the Governmental Decree.

2.1.1.7 Land Rights

	2016	2017
Which of the following is permitted to the private partner?		
Transfer land lease/use/ownership rights to third party	✓	✓
Use leased/owned land as collateral	✓	✓
Mortgage leased/owned land	✓	✓
Is there a legal mechanism for granting wayleave rights, for example, laying water pipes or fiber cables over land occupied by persons other than the government or the private partner?	no data	no data
Is there a land registry/cadastre with public information on land plots?	✓	✓

	2016	2017
Which of the following information on land plots is available to the private partner?		
Appraisal of land value	no data	no data
Landowners	✓	✓
Land boundaries	✓	✓
Utility connections	✓	✓
Immovable property on land	✓	✓
Plots classification	✓	✓

The key regulations governing land use rights and land acquisition are the Civil Code of Georgia, Law of Georgia on State Property, and Local Self-Governance Code. In practice, government makes land and the right to build available to execute each PPP scheme, which has been one of the essential obligations of the government in existing PPP projects. The objectives of land use and time frame of assignment of the required lands for each project are agreed on a case-by-case basis with the government, and further special decree regarding such land transfer is issued. Such transfer is registered in the National Agency of Public Registry⁴ and usually the registered land rights are attached with the performance obligations of the private partner. Transfer of land lease/use or ownership rights to third party, use of such land as collateral, or mortgage of leased/owned land is allowed only when consent of the relevant government body is in place. It is also noteworthy that the investment obligation/privatization obligation is attached to such land plots for the benefit of the government, until performance of obligations under relevant agreement by the private party.

As for the Draft PPP Law, it is understood that the PPP agreement may establish the obligation of the public partner to transfer to the private partner the public infrastructure and/or related property, and may either establish that the public infrastructure and/or the related property shall or shall not be returned to the public partner upon termination of the agreement. Transfer of state-owned property and related matters are governed by the Law of Georgian on State Property, subject to exceptions as set out in that law. Unless otherwise stipulated in the PPP agreement, the private partner may transfer any rights related to public infrastructure and related property to third parties for a term that shall not exceed the term of the respective private partner's rights under the PPP agreement, subject to the public partner's prior written consent.

Furthermore, provision of land and subsoil use rights or any other licenses or permits is intended as one of the types of state support in PPPs.

⁴ National Agency of Public Registry. www.napr.gov.ge.

2.1.1.8 Environmental and Social Issues

	2016	2017
Is there a local regulation establishing a process for environmental impact assessment?	✓	✓
Is there a legal mechanism for the private partner to limit environmental liability for what is outside of its control or caused by third parties?	no data	no data
Is there a local regulation establishing a process for social impact assessment?	✓	✓
Is there involuntary land clearance for PPP projects?	✓	✓

The Policy Document lists environmental and social sustainability as one of the key principles of PPPs, and sets out the need to evaluate the conformity of PPP to applicable environmental and planning requirements as well as environmental and social impact assessments which shall take place before executing the agreement. The same principle is repeated in the Draft PPP Law.

The Georgian Law requirements and procedures for environmental impact assessment (EIA) are set out in the Code of Georgia on Environmental Impact Assessment adopted on 1 June 2017, which repealed the Law of Georgia on Environmental Impact Permit and, consequently, the permit was substituted by the similar document on environmental protection. The code regulates matters related to strategic documents and public or private activities, which may have significant effects on the environment, human life, and/or health. Following the structural changes of the Government of Georgia, the Ministry of Environment and Natural Resources (formerly responsible for issuing the environmental impact permit) was merged with the Ministry of Agriculture and formed the Ministry of Environment Protection and Agriculture of Georgia.

The main stages of EIA include a scoping procedure, preparation of an EIA report by the person carrying out activities or an adviser, public participation, assessment by the Ministry of Environment Protection and Agriculture of information included in the EIA report, conduct of an expert examination, and implementation of a transboundary EIA procedure, if necessary. Assuming the state review is favorable, a decision is issued by the Ministry of Environment Protection and Agriculture. This is an essential prerequisite for the issue of a construction permit.

Since the mid-1990s, Georgia has developed and has updated a number of laws to regulate landownership rights and expropriation processes. All land rights are properly registered in the National Agency of Public Registry maintained by the Ministry of Justice of Georgia.

In terms of expropriation, a key principle is that compensation of physical assets should be provided based on current market prices without depreciation. The laws also provide for compensation for income losses (e.g., losses resulting from loss of harvest and/or business closure). The laws require consultation with and prior notification of the affected people, so that they are fully aware of and participate in the expropriation process.

The laws state that the government can acquire property through negotiated settlement (this option should be preferred, where possible), or the state can expropriate any property if crucial for public needs. Expropriation for essential public needs requires a presidential decree and the court decision. Decision of the court shall give a detailed description of confiscable property and due compensation to the owner.

In contrast to the requirements of international financing institutions, the laws do not provide for compensating the loss and/or affected assets of informal (illegal) tenants or land users. Also, the laws do not require developing a grievance mechanism for the physically or economically displaced people.

2.1.1.9 Foreign Investor Participation Restrictions

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Transport			Energy		
Roads	100%	100%	Power generation	100%	100%
Railways	100%	100%	Power transmission	100%	100%
Ports	100%	100%	Power distribution	100%	100%
Airports	100%	100%	Oil and gas	100%	100%
Water and wastewater			Municipal solid waste	100%	100%
Bulk water supply and treatment	100%	100%	Social infrastructure		
Water distribution	100%	100%	Healthcare infrastructure	100%	100%
Wastewater treatment	100%	100%	Healthcare services	100%	100%
Wastewater collection	100%	100%	Education infrastructure	100%	100%
Information and communication technology			Education services	100%	100%
Fixed line infrastructure	100%	100%	Government buildings	100%	100%
Fixed line services	100%	100%	Prisons and correction centers	100%	100%

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Wireless/mobile infrastructure	100%	100%	Social housing	100%	100%
Wireless/mobile services	100%	100%	Sport and leisure facilities	100%	100%

Georgia's current legislation grants foreign investors the right to invest in almost any field of activity with a few exceptions. Restrictions are also imposed on investments in the fields that represent the exclusive authority of the State of Georgia, for example, energy dispatching activities.

The Law on Support and Warranties for Investment Activity establishes certain restrictions on the investment sector. The said law provides a list of sectors which may be invested into without assignment of the management rights. Those sectors include activities related to regulation of the traffic of maritime and transportation methods within the territorial waters of Georgia and seaport waters, and provision and control of its safety, railway traffic control activities, activities related to the regulation of the traffic of air vessels and provision of the safety and control of flights within the airspace of Georgia, and activities related to the peaceful use of nuclear energy.

Unless limited by Georgian legislation, any foreign investor enjoys the same rights in Georgia as a company registered in Georgia.

Having paid taxes and duties, an investor is entitled to convert the proceeds (income) from an investment and other funds in a banking institution of Georgia at the market exchange rate and repatriate them abroad without limitation. The investor may also freely sell, lease, or mortgage property obtained in Georgia. The investor is entitled to take abroad any of the investor's movable property.

As a general note, the fundamental principles of PPPs under the Draft PPP Law list the nondiscrimination principle as fair and equal treatment of all public and private, and foreign and domestic entities.

Furthermore, the Draft PPP Law does not set any limits for foreign investor participation in PPP projects. The only limitation is made for the state- or municipal-owned enterprises which are supposed to participate in the share capital of the bidder/private partner directly or indirectly as a minority shareholder, but in any case in the amount cumulatively not exceeding the threshold established by the Governmental Decree.

The Law of Georgia on Agricultural Land Ownership restricted foreign citizens (as well as local companies with participatory interest of foreign citizens) and legal persons registered abroad to own agricultural land plots in Georgia. However, the said article had been invalidated by Decision No. 3/1/512 of 26 June 2012 of the Constitutional Court of Georgia and enforcement of the said article is suspended. However, as long as no relevant changes were made to the

Constitution of Georgia, the Public Registry is not yet registering agricultural lands to foreign citizens, foreign companies, and local companies with participatory interest of foreign individuals. No restrictions on land use or ownership for land plots, except those that have agricultural land status.

Is there any restriction for foreign investors on:	2016	2017
Land use/ownership rights as opposed to similar rights of local investors	no	no
Currency conversion	no	no

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	14	18	4
PPP projects with foreign sponsor participation (as a share to the total number of PPP projects)	93%	75%	44%

2.1.1.10 Dispute Resolution and Enforcement Mechanism

	2016	2017
Can a foreign law be chosen to govern PPP contracts?	✓	✓
What dispute resolution mechanisms are available for PPP agreements?		
Court litigation	✓	✓
Local arbitration	✓	✓
International arbitration	✓	✓
Has the country signed the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?	✓	✓

The Concession Law stipulates that disputes in connection with a concession agreement shall be settled in courts. One of the concessionaire's rights is to bring claims to the court or arbitration court "against public organs for their abuse of power." However, there is no explicit reference to international arbitration. It is understood that it is possible to include provisions for international arbitration at the individual PPP contract level. Similarly, the choice of foreign law is negotiable on a case-by-case basis; however, Georgian Law has been a governing law for most of the PPP contracts.

The Draft PPP Law stipulates that the PPP agreement shall be governed by the laws of Georgia, but parties are free to choose the dispute settlement process that will be applied to disputes arising out of a concession agreement, a direct agreement, or any other agreement related to a PPP project. Furthermore, the parties to a PPP agreement may freely choose the mechanism of dispute resolution, including national or international commercial arbitration, and the procedural rules for such dispute resolution. However, if the parties do not indicate the preferred dispute resolution mechanism in the PPP agreement, any dispute shall be settled by the courts of Georgia.

2.1.1.11 Lender's Security Rights

	2016	2017
Does the law specifically enable lenders the following rights?		
Security over the project assets	x	x
Security over the land on which they are built (land use right)	x	x
Security over the shares of a PPP project company	x	x
Can there be a direct agreement between the government and lenders?	x	x
Do lenders get priority in the case of insolvency?	✓	✓
Can lenders be given step-in rights?	✓	✓

There is no provision in the law empowering the concessionaire to pledge or assign the assets for which it has user rights under a project agreement or shares of the project company or project agreement.

The law is also silent on the possibility of step-in rights for lenders; however, this can be allowed in PPP agreements.

The Draft PPP Law explicitly allows lenders' step-in rights in cases of private partner's material default, or any other cases defined by the PPP agreement, meaning temporarily take over the operation of public infrastructure to ensure the effective delivery of public services. The cost of such intervention shall be borne by the party specified in the PPP agreement.

The Law of Georgia on Insolvency Proceedings (or the Insolvency Law) provides the hierarchy of creditors for determining the order by which the claims will be satisfied. The first three ranks cover enforcement and other expenses. Secured creditors are listed in the third rank. The secured creditors will be able to satisfy their claims from the granted collateral on a priority basis in comparison with other unsecured creditors. The ability of the secured creditors to enforce their rights under the security documents, or collect from the collateral provided, may be adversely affected by the tax lien, which may be claimed by Georgian tax authorities in case of tax liability of the owner of the collateral.

2.1.1.12 Termination and Compensation

	2016	2017
Does the law specifically enable compensation payment to the private partner in case of early termination due to:		
Public sector default or termination for reasons of public interest	✓	✓
Private sector default	✓	✓
Force majeure	✓	✓
Does the law enable the concept of economic/financial equilibrium?	✓	✓
Does the law enable compensation payment to the private partner due to:		
Material adverse government action	✓	✓
Force majeure	✓	✓
Change in law	✓	✓

The Concession Law stipulates that the alteration, prolongation, or termination of a concession agreement terms shall be effected under the legislation of Georgia. The law does not specify grounds for termination. Thus, general contract law, specifically the Civil Code of Georgia and, to some extent, the Law on Promotion and Guarantees for Investments, are applicable.

According to the above, deprivation of an investment may take place only in cases directly determined by law, by court decision, and upon urgency determined by the organic law and only with appropriate compensation. Decision on deprivation of investments, as well as terms of compensation, may be appealed to the courts of Georgia, unless otherwise provided in the agreement between the parties or in the international agreements of Georgia.

In practice, the grounds of termination and compensation provisions are set in individual PPP contracts.

As per the Draft PPP Law, grounds, procedure, and consequences of PPP agreement termination shall be defined in the PPP agreement.

2.1.1.13 Government Support

	2016	2017
Is project development fund available?	x	x
Land acquisition support from the government:		
Resettlement and/or compensation cost to residents at the project site	x	x
Imposed limits on time frame to complete land acquisition (day)	x	x
Is there a dedicated agency to streamline land acquisition? ^a	x	x
Exemption from/reduction of land use fees	x	x
Viability gap fund (VGF)	x	x
Limits to VGF as a percentage of projects capital cost	n/a	n/a
Government guarantees:^b		
Currency inconvertibility and transfer risk	✓	✓
Foreign exchange risk	✓	✓
War and civil disturbance risk	✓	✓
Breach of contract risk	✓	✓
Regulatory risk	✓	✓
Expropriation risk	✓	✓
Government payment obligation guarantee	✓	✓
Credit guarantees	x	x
Minimum demand/revenue guarantee	✓	✓
Availability-/performance-based payment contracts	✓	✓
Tax subsidies	x	x

Notes:

^a When the land is owned by the state, the dedicated agency is the State Property Agency and the land acquisition process is managed under the Law of Georgia on State Property. In case of municipal lands, the municipal self-governments are in charge of the process, which is implemented under the Local Self-Governance Code.

^b Yellow color and tick (✓) indicate that the law is silent, but the guarantee can be negotiated at a PPP contract level. Red color and cross (x) indicate that the law is silent, and there have not been any precedents in the past of having such guarantee at a PPP contract level.

Details of available government support for PPP projects in Georgia are provided in Table 2.1.

Table 2.1: Available Government Support for PPP Projects in Georgia

Government Support Type	Comments
Project development fund	Project development fund is not available in Georgia.
Land acquisition and resettlement	No information.
Viability gap fund	Viability gap fund is not available in Georgia.
Government guarantees	<p>Currently, there is no regulation that govern the provision of state guarantees for the PPP projects.</p> <p>Under the current Concession Law, “the party, which has issued a permit to conclude a concession agreement, is obliged inter alia to reimburse damages suffered by the concessionaire due to illegal acts of state organs.”</p> <p>In practice, guarantees can be negotiated on a case-by-case basis at the PPP contract level and/or regulated according to the general rules applicable to protection of ownership (Constitution and Civil Code of Georgia), as well as by the Law of Georgia on Promotion and Guarantees of Investments. In Georgia, ownership rights are protected by the Constitution of Georgia. Seizure of property is only permitted in situations described in the law where such a seizure is required in public and state interests. Adequate compensation will be given to an investor for the seized property. Compensation may not be less than the market value of the seized property. Compensation should also include reimbursement for the loss incurred by the investor.</p> <p>In addition, the Georgian legislation offers a special status to projects that are of strategic importance for the state and have a value of at least GEL8 million, or serve a special purpose, or are of strategic importance for the country’s economy. The status of an investment of high importance can also be assigned to an investment that exceeds GEL2 million and is implemented in any of the highland regions of Georgia. The status of an investment of high importance grants the investor additional rights and guarantees. However, there is no clarity to what these additional rights include.</p> <p>It is known that, in the hydropower generation sector, some PPP projects received revenue subsidy and/or revenue guarantee under a power purchase agreement.</p>
Availability- /performance-based payment contracts	There are no regulations allowing for availability- and performance-based payment PPP schemes. So far, only hydropower generating PPP projects have been implemented under partial availability-based payment method, under a power purchase agreement.
Tax subsidies	No tax subsidies exist that are specifically granted for PPP projects.

PPP = public-private partnership.

Source: Mott MacDonald.

The Policy Document stipulates that the government shall decide on public sector support, including financial participation measures based on the nature and model of a particular PPP project after its proper assessment and subject to all required approvals. Such public support will include direct government financing or cofinancing, funding from a variety of nonbudgetary funds and state entities, budget guarantees, nonbudgetary guarantees / contractual obligations, and contingent compensatory payments. It is promised in the policy that the government will adopt a separate regulation on public sector support; among other things, financial participation, including its forms and provision methodology.

According to the Draft PPP Law, the following types of state or municipality support will be granted by the public partner to the private partner:

- *output-based payments and/or availability payments;*
- *guarantees on consumption, traffic, customers, or revenue;*
- *guarantees of tariffs and/or prices for public services;*
- *guarantees on the purchase of certain type of goods or service, with predefined price. Type of goods or service shall be defined by legal acts of government;*
- *capital and operational grants and/or subsidies to cover certain types of expenses and return on investment as determined by the Government of Georgia, including grants in kind;*
- *provision of land and subsoil use rights or any other licenses or permits under Georgian Laws;*
- *transfer to the private partner of exclusive rights to intellectual property belonging to the state or municipality; and*
- *transfer to the private partner of exclusive rights to perform certain commercial activities.*

The PPP agreement may provide for a mixture of any or all relevant forms of payment listed above. Ceilings for state liabilities of PPPs shall be set out; budgetary legislation and the methodology for defining such ceilings shall be elaborated and approved by the Government of Georgia.

PPP projects that received government support	1990–2016	1990–2017	In 2017
Viability gap funding	-	-	-
Government guarantees	10	19	9
Availability-/performance-based payment basis	10	19	9

2.1.1.14 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✗	✗
Power purchase agreement	✓	✓
Capacity take-or-pay contract	no data	no data

What standardized contracts are available and used in the market?	2016	2017
Fuel supply agreement	no data	no data
Transmission and use of system agreement	no data	no data
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	no data	no data

The Draft PPP Law provides for the standard PPP contract and determines the main terms and conditions to be included in the standard PPP contract.

Due to the reforms of the energy sector, the execution of standard power purchase agreements has been suspended since December 2017.

2.1.2 Institutional Capacity for Implementation

2.1.2.1 Institutional Setup

	2016	2017
Is there a specialized government agency (or agencies) established for PPP purposes (e.g., PPP unit)?	x	x
What role does this PPP unit have?		
Guidance to and coordination between other government agencies	✓ ^a	✓
Support (e.g., PPP project preparation, appointment of advisers, running PDF)	x	x
Appraisal of PPP project feasibility studies	x	x
Approval of PPP projects	x	x
Procurement	x	x
Management, monitoring, and enforcement of ongoing PPP contracts	x	x

Note:

^a To some extent, the coordination function is fulfilled by the Ministry of Economy and Sustainable Development.

PPP-promoting institutions in Georgia are listed in Table 2.2.

Table 2.2: PPP-Promoting Institutions in Georgia

Institution	Role in Promoting PPP
Ministry of Economy and Sustainable Development	<ul style="list-style-type: none"> The ministry is currently coordinating government policy and institutional activities for establishing the PPP framework in Georgia.
Fiscal Risk Management Unit of the Ministry of Finance	<ul style="list-style-type: none"> Performance of fiscal risk analyses, evaluation and preparation of conclusion regarding the presented projects/regulations, elaboration of recommendations related to presented projects/regulations in order to eliminate the fiscal risks, collection of financial information for state-owned companies and identification of conditional liabilities and evaluation of such obligations, identification and evaluation of fiscal risks of contingent liabilities of the state
Georgian National Investment Agency	<ul style="list-style-type: none"> Legal entity of public law with the main function to promote foreign direct investments in Georgia. In 2015, the Agency moved under the direct supervision of the Prime Minister of Georgia. The agency plays a role of moderator between foreign investors and the Government of Georgia, ensuring that the investor gets different types of updated information and has means of effective communication with the government bodies. The agency is also authorized to represent the investor in dealings with other State authorities and to assist the investor in obtaining licenses/permits.
The PPP Center	<ul style="list-style-type: none"> The initiative group is dedicated to introducing PPP in Georgia. The initiative group consists of economic and communication consultants interested in the PPP model. PPP center's main mission is to focus on research, educational, and editorial work. The Center aims to initiate a dialogue between the private and public sectors and to aid the start of new PPP projects for economic improvement.

PPP = public-private partnership.

Sources: PPP Center. <http://ppp.ge/en/>; Georgian National Investment Agency. <http://www.investinggeorgia.org/en/>; Asian Development Bank. 2015. *Technical Assistance to Georgia: Development of Public-Private Partnerships*. Manila.

It is stipulated in the Draft PPP Law that the Governmental Decree will establish the clear institutional framework for the purposes of developing and implementing PPPs. The Draft PPP Law, similar to the Policy Document, establishes the PPP Unit (Legal Entity of Public Law), which shall be engaged in the development of PPP and perform functions related to PPPs, including, among others, to identify and propose prospective PPP projects to competent bodies; conduct assessment of project concepts proposed by the competent bodies; arrange for selection, hiring, and supervision of consultants at any stage of PPP; coordinate actions, including obtaining information related to PPP monitoring activities, with the competent bodies responsible for PPP; and prepare standard documentation including draft model contractual provisions for PPP contracts.

2.1.2.2 Project Planning

	2016	2017
Is there a PPP project pipeline developed and available?	x	x
Is preliminary selection of PPP projects consistent with public investment prioritization?	x	x
Is there a screening/identification methodology to identify a list of potential PPP projects from public investment priority projects?	x	x

No officially developed pipeline for planned PPP projects is available. Similarly, no official methodology has been developed for identification of potential PPP projects.

According to the Draft PPP Law, PPP shall be developed through a defined process that will entail various stages and related procedures, among other things, project identification and initiation, project preparation, selection of the private partner, implementation, and post-implementation assessment. Procedures for each step are provided in more details in the draft law.

2.1.2.3 Project Preparation

	2016	2017
Number of project appraisal stages	n/a	n/a
What feasibility analyses are required for the project to be approved as a PPP?		
Technical feasibility	x	x
Financial feasibility	x	x
Legal feasibility	x	x
Environmental and social sustainability	x	x
Value for money assessment	x	x
Fiscal affordability assessment	x	x
PPP structuring and risk allocation	x	x
Initial market testing	x	x
Number of approvals to be obtained by public sector to get final go-ahead to commence PPP project procurement	no data	no data
Is the approval from the Ministry of Finance (or equivalent entity) required before commencement of procurement?	no data	no data
Is it a normal practice to appoint independent, international, and qualified advisors to assist the government with project preparation?	no data	no data

There is no official guidance or regulations on the analysis to be undertaken for PPP project preparation and, hence, the answers in the table above are marked red.

In the energy sector, the private proponent winner is expected to carry out a technical and economic feasibility study and an environmental and social impact assessment before the construction can commence, according to the Decree No. 214 of 21 August 2013, which sets up the rules for expression of interest for technical and economic feasibility studies, building, owning, and operation of electricity-generating plants in Georgia. As a general note, the government plans to update the entire regulations of the energy sector during 2018.

As for the Draft PPP Law, upon identification of PPP by competent body, such body shall prepare a project concept following the requirements established by the Governmental Decree and submit it to the PPP Unit and the Ministry of Finance for their review. The project concept, together with the opinion of the PPP Unit and evaluation of the Ministry of Finance, is submitted to the Government of Georgia by a competent body for approval. The government shall approve commencement of project preparation of a PPP, upon which the relevant competent body shall undertake the project preparation works and engage the PPP Unit and the Ministry of Finance for the execution of their respective functions.

The preparation of a PPP shall be conducted in accordance with the Governmental Decree and shall be accompanied by financial and economic analysis, which shall evaluate the cost of the PPP and expected social and economic effects of its implementation, the affordability of the PPP for the budget of the competent body in case of the involvement of public financing in the PPP, the environmental and social implications of PPP implementation, and the possible measures designed to mitigate its adverse effects. The outcomes of preparation of the PPP shall be submitted to the PPP Unit and the Ministry of Finance for further review. The PPP-related documents and respective studies, together with the evaluation of the PPP Unit and the Ministry of Finance, shall be submitted to the government for approval prior to the private partner selection stage. Based on the submitted documentation, the Government of Georgia shall make a decision on approval or rejection or revision of the project and, subject to the approval of the Government of Georgia, the competent body shall prepare tender documents and commence selection of private partner.

2.1.2.4 Risk Allocation

	2016	2017
Preferred risk allocation matrix as reference	x	x

There is no official guidance developed for risk allocation in PPP projects. The risk allocation is defined and negotiated at each individual PPP agreement level.

2.1.2.5 Procurement

	2016	2017
Is competitive bidding the only method for PPP partner selection?	✓	✓
In case of competitive tender:		
Prequalification required?	x	x
Minimum time allowed to submit prequalification/expression of interest (day)	none	none
Minimum time allowed to submit a bid:		
Domestic bidding (day)	none	none
International bidding (day)	none	none
Is negotiation available?	x	x
Is there a process allowing unsuccessful bidders to challenge the award/submit a complaint?	x	x
If yes, maximum time allowed to submit a complaint starting from announcement of a preferred bidder	n/a	n/a
Maximum time limit from bid closing date until selection of a preferred bidder	none	none
Maximum time limit from selection of a preferred bidder until signing the contract	none	none
Transparency. Which of the following is published?		
Procurement notice	✓ ^a	✓
Q&A during bid clarification stage	x	x
Evaluation results to bidders	x	x
Award notice	x	x
Contract	x	x
Confidentiality	x	x

Note:

^a The law does not prescribe publishing the procurement notice, but it is normally published.

The Concession Law contains very few provisions in relation to the selection of concessionaires, as it only refers to the Georgian legislation. However, no such legislation can be identified for concessions. The only law that governs procurement is the Law of Georgia on Public Procurement (2005), which does not refer to PPP or concessions, and applies to the procurement of any goods, construction works, or services to meet state needs and financed by state budget, credit under state guarantees. Therefore, in the table above, the answers to the questions are marked red.

The procurement of PPP projects in the energy sector has been regulated by a separate decree, No. 214 of 21 August 2013, which sets up the rules for expression of interest for technical and economic feasibility studies, building, owning, and operation of electricity-generating plants in Georgia, and it is covered in more detail in section 2.2.

The Draft PPP Law includes detailed stages of procurement of concession, which shall be extended in greater details by the promised Governmental Decree. The proposed procurement steps include tender announcement; pre-qualification of bidders; submission of tender proposals; evaluation of tender proposals; revealing shortlisted candidates (if applicable) or winning bidder; conducting negotiations with the bidders, shortlisted candidates, or winning bidder; and execution of the concession agreement.

As for the selection of the private party (i.e., contractor or consortium including the independent power producer) in PPP, it shall be regulated by the Law of Georgia on State Procurement.

2.1.3 PPP Market Maturity

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close	15	24	9
PPP projects currently in preparation	n/a	n/a	52
PPP projects currently in procurement	n/a	n/a	31

2.1.4 Financial Facilities

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	no data	no data	no data
PPP projects that received export credit agency/international financing institution financing	5	5	-

	2016	2017
Availability of nonrecourse/limited recourse hard currency loan	✓	✓
Maximum tenor (year)	7–8 years	7–8 years
Up-front arrangement fee	40–200 bps	40–200 bps
Floor rate (reference rate)	LIBOR	LIBOR

	2016	2017
Margin rate	750-1,000 bps	650-900 bps
Political risk cover premium	150-400 bps	150-400 bps
Availability of nonrecourse/limited recourse local currency loan	✓	✓
Maximum tenor (year)	3-5 years	4-6 years
Up-front arrangement fee	40-50 bps	40-50 bps
Floor rate (reference rate)	NBG refinancing rate	NBG refinancing rate
Margin rate	900-1,100 bps	800-1,000 bps
Availability of interest rate swaps	✓ (Very Limited)	✓ (Very Limited)
Forward duration of interest rate swap (year)	5-10 years	5-10 years
Availability of currency swaps	✓	✓
Forward duration of currency rate swap (year)	<5 years	<5 years
Project financing through project bond issuance	✓	✓
Percentage of project bonds out of total debt for project financing	<30%	<30%
Availability of project financing from local public sector banks	×	×
Max tenor for loan from local public sector banks (year)	n/a	n/a
Percentage of foreign debt out of total debt for project financing	>50%	>50%
Typical D:E ratio	60:40	60:40
Timeline to financial close	no data	no data
Minimum DSCR covenant levels	no data	no data

bps = basis points, D = debt, DSCR = debt-service coverage ratio, E = equity, LIBOR = London interbank offered rate, NBG = National Bank of Georgia.

Historically in Georgia, large infrastructure projects were financed through donors and concessional loans. About 60% of the public debt is formed as a result of borrowing for infrastructure projects. The largest multilateral lender is the World Bank followed by ADB. Among bilateral lenders, Germany's KfW and Japan's JICA have provided the largest amount of concessional financing for infrastructure.

The European Bank for Reconstruction and Development (EBRD) has invested about €2.98 billion in the country, but mostly in the private sector. In April 2017, the EBRD pioneered the first-ever GEL-denominated Eurobond.⁵

More than GEL10 billion (equivalent to \$4 billion) is expected to be coming from development partners in the next 5 years. The International Finance Corporation has invested \$1.7 billion in energy, ports, and airports in Georgia.

The European Investment Bank ranks among the first public financiers of the country. The bank has an ongoing lending portfolio amounting to more than €1.5 billion covering large sectors of the economy, including road and water infrastructures.⁶

In 2011, Georgia created the JSC Partnership Fund, a 100% state-owned fund that invests in infrastructure projects via special purpose vehicles. The fund's main objective is to promote investment in Georgia by providing cofinancing (e.g., equity, mezzanine) in projects at their initial stage of development. The main areas of investment for the fund are power generation, agriculture, real estate, and manufacturing. Some of the projects are Gardabani Thermal Power Plant, Nenskra Hydropower Project, and Kasleti 2 Hydropower Project.

Although there are arguments for infrastructure expenditure to be treated differently from current expenditures, financing infrastructure with borrowed funds affects budget deficit and increases debt. Considering the government's commitment to gradually reduce the budget deficit, it might have to finance part of the infrastructural projects from its own revenue resources.

2.2 Energy

2.2.1 Regulatory Framework

2.2.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Power generation	100%	100%
Power transmission	100%	100%
Power distribution	100%	100%
Oil and gas	100%	100%

⁵ United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). 2017. *Infrastructure Financing for Sustainable Development in Georgia*.

⁶ *Georgia Today*. 2018. \$150million Approved by EIB Board of Directors for Nenskra HPP Project Financing. 9 February. <http://georgiatoday.ge/news/9064/%24150million-Approved-by-EIB-Board-of-Directors-for-Nenskra-HPP-Project-Financing->.

2.2.1.2 Government Contracting Agency

The energy market in Georgia is deregulated and has been unbundled into generation, transmission, and distribution companies. Energy sales are predominantly via bilateral contracts. A small percentage (from 10% to 15% as mandated by the Ministry of Energy and, since December 2017, by the Ministry of Economy and Sustainable Development) of total energy production is traded via the Electricity System Commercial Operator (ESCO), which is wholly owned by the state-owned JSC Partnership Fund.

ESCO acts as the electricity market operator and manages the sale and purchase of energy for balancing market supply and demand. For new hydropower developments, the electricity market operator is also involved in establishing energy contracts which may be under "take-or-pay" type arrangements for the full or partial capacity of the plant.

2.2.1.3 Sector-Specific Regulations

Key regulations are the Law of Georgia on Electric Energy and Natural Gas (1999) and Law on Electricity (Capacity) Market Rules. According to the Law on Electric Energy and Natural Gas, small power plants (under 13 MW) are fully deregulated, while specific regulations apply for energy sales for larger plants.

The State Program for Renewable Energy Act has been established to set out the regulations for energy sales from new hydropower projects depending on the installed capacity.

Energy tariffs for regulated assets are regulated by the Georgian National Energy and Water Regulatory Commission (GNERC). Regulated assets exclude hydropower plants under 13 MW, transmission, dispatch and distribution systems, and gas transportation and distribution.

GNERC also grants licenses for activities in the power sector; establishes licensing terms and rules; and grants, modifies, and revokes licenses in compliance with the Law on Licenses and Permits.

The procurement of energy-generating PPP projects is done in accordance with the Government of Georgia-approved Resolution No. 214 of 21 August 2013 which sets up the rules for expression of interest for technical and economic feasibility studies, building, owning, and operation of electricity-generating plants in Georgia. This resolution applies to the List of Potential Power Plants in Georgia.

Order N40 of the Minister of Energy governs the terms and conditions for submission and review of the proposals on construction technical and economic feasibility study, construction, ownership, and operation of those hydropower plants to the Ministry of Energy of Georgia, which are not included in the List of Potential Power Plants in Georgia.

Currently, all the abovementioned acts are under revision by relevant government bodies, and it is forecasted that by the end of 2018, a new legal framework for the energy market will be in place.

2.2.1.4 Sector Regulators

Details of the energy sector regulatory agencies are shown in Table 2.3.

Table 2.3: Energy Sector Regulatory Agencies in Georgia

Agency	Function
Georgian National Energy and Water Regulatory Commission	<ul style="list-style-type: none"> Responsible for day-to-day regulation of the electricity, gas, and water sectors. Establishes rules and conditions for granting generation, transmission, dispatch, distribution, as well as natural gas transportation and distribution licenses; also grants, modifies, and revokes licenses in compliance with the Law of Georgia on Licenses and Permits, Georgian Law on Electricity, and Natural Gas and Licensing Rules. Sets and regulates tariffs for electricity generation (for hydropower plants where construction has started prior to 1 January 2008), transmission, dispatch, distribution, import, export, and consumption, as well as for natural gas transportation, distribution, import, export, supply, and consumption, according to the main directions of the state energy policy legal acts issued based on this policy and established methodology. Within its competence, resolves arguments between licensees, importers, exporters, suppliers, and consumers, and between licensees and consumers. Establishes control over the conditions of licensing within the electricity and natural gas sectors of Georgia, and for violation of the conditions, shall combine the relevant administrative sanctions, which are determined by the existing Georgian legislation. Organizes and coordinates activities with regard to mandatory certification within the energy sector.
Ministry of Energy of Georgia	<ul style="list-style-type: none"> From December 2017, this ministry is officially merged with the Ministry of Economy and Sustainable Development of Georgia. The principal government policy maker responsible for overall energy policy in Georgia, although the overall mandate now is focused on providing a competitive market through efficient regulation and developing and overseeing energy strategy. The process of updating the entire energy market regulations has started in 2017. Electricity rules, the Law of Georgia on Electricity and Natural Gas, and a number of normative acts governing the energy sector are being updated. It is known that government has suspended execution of standard power purchase agreements with guaranteed purchase price arrangements until the reform of this specific sector is over.
Ministry of Economy and Sustainable Development of Georgia	<ul style="list-style-type: none"> Legal successor of the Ministry of Energy since December 2017.

Sources: Government of Georgia, Ministry of Energy. <http://www.energy.gov.ge>; Georgian National Energy and Water Regulatory Commission. <http://gnerc.org/en/home>.

2.2.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✗	✗
Power purchase agreement	✓	✓
Capacity take-or-pay contract	no data	no data
Fuel supply agreement	no data	no data
Transmission and use of system agreement	✗	✗
Engineering procurement and construction contract	no data	no data

According to the changes of December 2017 to the Resolution No. 214 of the Government of Georgia, the regulation on guaranteed power purchase agreement in winter months a 10-year term with ESCO was removed and the government has suspended execution of PPAs under the said resolution, unless exclusively decided by the government. It is understood that PPAs can still be executed on the basis of negotiations for each specific case considering the importance of the project either through Resolution No. 214 or Order N40 as referred above.

2.2.2 Institutional Capacity for Implementation

2.2.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The National Energy Policy has established a focus on renewable energy sources, specifically hydropower, to fulfill the country's energy supply. This focus has been aimed initially on reducing energy imports and then phasing out thermal generation. The focus on renewable development is also enshrined in the Law on Electric Energy and Natural Gas.

At this stage, the Ministry of Energy's strategy of market liberalization, supported by a legislative framework for renewable projects, appears to be relying on market determination for project planning.

The government is in the process of revising the National Energy Policy, and it is planned that energy projects will fall under the new pipeline to be established for PPPs.

The Ministry of Energy approves the list of potential power plants by individual administrative-legislative act and publishes the list and basic information of the potential power plants on the

official website. The list is periodically reviewed by the ministry. The latest list of the potential projects ⁷ includes 98 hydropower plant projects, which comprise

- 7 large power plants with capacity from 60 MW up to 130 MW—total 614 MW,
- 31 medium-sized power plants with capacity from 10 MW up to 38 MW—total 553 MW, and
- 60 small power plants with capacity from 1 MW up to 10 MW—total 348 MW.

2.2.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	78

Typically, project feasibility analysis is carried out by investors (the winner of an expression of interest). The latest list of the projects under feasibility study stage⁸ includes 78 power plant projects (including hydro, wind, and solar) of a total investment value of \$4 billion, comprising

- 10 large power plants with capacity ranging from 60 MW up to 300 MW—total 1,301 MW and total investment value of \$2.18 billion,
- 37 medium-sized power plants with capacity ranging from 10 MW up to 60 MW—total 1,268 MW and total investment value of \$1.67 billion, and
- 31 small power plants with capacity ranging from 0.5 MW up to 10 MW—total 109 MW and total investment value of \$0.16 billion.

Of the 78 projects, 50 projects are with an investment value of more than \$10 million.

2.2.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	1	2	1
Competitive bidding process	10	19	9
License scheme	-	-	-
PPP projects currently in procurement	n/a	n/a	30

⁷ The list of potential projects can be accessed from Ministry of Energy website at <http://www.energy.gov.ge/projects/pdf/pages/List%20of%20Potential%20HPPs%201759%20eng.pdf>.

⁸ Government of Georgia, Ministry of Energy. 2017. *List of ongoing renewable investment projects in Georgia*. (29.12.2017) <http://www.energy.gov.ge/projects/pdf/pages/Ongoing%20Investment%20Projects%201810%20eng.pdf>.

The Ministry of Energy (since December 2017, as Ministry of Economy and Sustainable Development) publishes an expression of interest for developing a particular power plant from the list of planned projects. As a result of the expression of interest, the memorandum, which is an agreement on cooperation between the parties, is concluded between the Government of Georgia, the ESCO, and the winner of the expression of interest. Other parties can be added to the memorandum, if necessary. The winner is typically determined as the one proposing the lowest electricity price.

Currently, on the Ministry of Energy's website, Expressions of Interest have been published for 30 projects.⁹

2.2.3 Features of Past PPP Projects

2.2.3.1 PPP Projects That Reached Financial Close

	1990–2016		1990–2017		In 2017	
	Number	\$ million	Number	\$ million	Number	\$ million
PPP projects that reached financial close^a	10	2,041	19	2,336	9	294
<i>Renewable energy generation:</i>						
Solar	–	–	–	–	–	–
Wind	–	–	–	–	–	–
Hydro	10	2,041	19	2,336	9	294
Geothermal	–	–	–	–	–	–
Waste/biomass	–	–	–	–	–	–
<i>Thermal energy generation:</i>						
Coal	–	–	–	–	–	–
Diesel	–	–	–	–	–	–
Natural gas	–	–	–	–	–	–

Note:

^a Projects shown in this table have a minimum investment value of \$10 million.

⁹ Government of Georgia, Ministry of Energy. Video Gallery. http://energy.gov.ge/news%20mediacenter.php?id_news_category=12&lang=eng.

Over 1990–2017, all PPP projects that reached financial close had been in the hydropower sector; however, a majority of such projects have been of small or medium capacity (below 60 MW). Only a few large hydropower plant (HPP) projects have been implemented:

- Nenskra HPP (280 MW)
- Dariali HPP (108 MW)
- Shuakhevi HPP (185 MW)
- Paravani HPP 2011 (80 MW).

It should be noted that an additional 45 HPP projects have been awarded over the last few years (including 30 projects with investment value of more than \$10 million), but construction has not been started, as companies have to meet condition precedents.

2.2.3.2 Foreign Investor Participation

	1990–2016		1990–2017		In 2017	
	Number	Share of the total number of projects	Number	Share of the total number of projects	Number	Share of the total number of projects
PPP projects with foreign sponsor participation	9	90%	13	68%	4	44%
Renewables	9	90%	13	68%	4	44%
Thermal	-	-	-	-	-	-

2.2.3.3 Government Support

	1990–2016	1990–2017	In 2017
PPP projects that received government support:			
Viability gap fund	-	-	-
Government guarantees	10	19	9
Availability-/performance-based payment basis	10	19	9

Before December 2017, payment guarantee was provided for the projects under a guaranteed power purchase agreement with the ESCO.

Although there is no VGF mechanism, the government has established several funds for supporting equity investment in the energy sector through the JSC Partnership Fund and dedicated Georgian Energy Development Fund.

Government support for renewable energy investment is also enshrined in legislation to encourage investment in these projects. This includes free access to the transmission system, preferential access to export energy interconnectors, and provision of take-or-pay agreements for deregulated assets. Generation and export activities are also exempted from value-added tax.

2.2.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	-	-	-
Government-paid contracts	10	19	9

As the majority of energy sales are by bilateral contracts, payment mechanisms are direct between the seller and purchaser (where the purchaser is typically the state-owned company) under a guaranteed power purchase agreement. For energy traded via the ESCO, the Electricity Market Rules establish the settling mechanisms for payments. Energy import and export are also managed by the ESCO.

2.2.3.5 Tariffs

	2016	2017
Is there a system of feed-in tariffs (FIT)?	x	x

For older regulated assets, tariffs are regulated by the Georgian National Energy and Water Regulatory Commission (GNERC). For new asset developments, the investor is free to negotiate tariffs with the GNERC, supported by the ESCO with respect to market management.

For domestic sales via the ESCO, tariffs are paid in local currency, while export energy tariffs may be paid in hard currency. Typically, tariffs for existing projects vary widely, due to the low marginal cost of operation for fully depreciated regulated assets and the cost-plus methodology of negotiating tariffs for new assets.

According to the market rules, asset operators have the right to a take-or-pay type agreement with the ESCO for provision of balancing energy. Considering that the market rules are being updated, new regulations are expected in 2018.

2.2.3.6 Risk Allocation

Typical risk allocation arrangements in energy PPP contracts are shown in Table 2.4.

Table 2.4: Typical Risk Allocation Arrangements in Energy PPP Contracts in Georgia

Risk	Private	Public	Shared	Comment
Demand risk			✓	Mix of bilateral and market operator sales
Revenue collection risk			✓	
Tariff risk		✓		Investor negotiates tariffs for new assets on cost plus principal
Government payment risk		✓		
Environmental and social risk	✓			
Land acquisition risk	✓			
Permits			✓	
Handover risk	✓			
Political risk		✓		
Regulatory risk		✓		
Interconnection risk		✓		
Brownfield risk: asset condition	✓			
Grid performance risk		✓		
Hydrology risk			✓	
Exploration and drilling risk	✓			

PPP = public-private partnership.

Source: Mott MacDonald.

2.2.4 Local Capabilities

Since the unbundling of the energy market, the participation of foreign investors in the market has resulted in increasing capability of local companies. International interconnection has resulted in international participation in the development of grid connection code and market rules. This modernization, coupled with capacity building and modernization of the state transmission operator (Georgian State Electrosystem), has seen an increase in focus on planning and investment in the transmission system. This provides a clear path for investors to understand the opportunities and implications of proximity to transmission systems.

There are four distribution companies within Georgia. Although all but Abkhazia are wholly or partially owned by foreign entities, the process of modernization of the distribution systems to support embedded connection for future assets is still ongoing.

There has also been a major push toward modernization or privatization of state-owned generation assets, so the industrial capability within the country to support new project development is thought to be well established.

2.2.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	no data	no data	no data
PPP projects that received export credit agency/international financing institution support	4	4	no data

All four large capacity HPP projects have been financed on a project finance basis, and have received IFI support in the form of debt and, sometimes, equity.

There is a state-owned JSC, Georgian Energy Development Fund, established in 2010, which aims to promote the realization of the country's energy potential and retrieval of appropriate funds, by developing projects and their effective implementation.

In addition to providing various consulting services for support at preconstruction and construction stages, the fund is able to partner with a reliable investor in renewable energy projects. The fund assumes a minority shareholding of a joint venture, preferably below 30% of equity or 10% of the total project investment cost. The fund can contribute with both in-kind and cash contribution. In-kind contribution might be with the project itself or any other asset or service provided. The fund should have an exit option at defined stages, mainly after commissioning.

2.2.6 Challenges

Challenges of PPP progress in the energy sector are presented in Table 2.5.

Table 2.5: Challenges of PPP Progress in the Energy Sector in Georgia

Challenges	Currently Implemented Tackling Measures
Current regulation prescribes that the project technical, economic, and environmental and social feasibility studies are done by the winning investor only after the award and signing of MOU, which will already set up expected construction start date. Such practice rules out the possibility of identifying project-related risks from the outset, and often leads to delays of the construction start due to companies failing to meet all the condition precedents. Social and environmental risks are quite significant in the hydropower sector, and often delays occur due to local opposition and related resettlement issues.	Initiated PPP Law stipulates for performance of project technical, economic, and environmental and social feasibility studies before execution of agreement.

continued on next page

Table 2.5 *continued*

Challenges	Currently Implemented Tackling Measures
An example of such an issue could be illustrated by the delays incurred on the 700-megawatt Khudoni HPP project, where despite the fact that construction had to start back in 2012, the project company failed to meet condition precedents under the contract and has not managed to commence the construction until the beginning of 2017, partially due to local protests and opposition of environmentalists. The government is now in the process of terminating the contract.	
Lack of knowledge of PPPs, as well as rapidly changing legal and institutional framework, is delaying the progress of PPPs in the energy sector. Although the energy regulations went through reforms in previous decade, current legal, regulatory, and institutional framework still insufficiently encourage private sector investment in hydropower, and this framework does not ensure the environmental sustainability of hydropower projects and transparent path for selecting the private party.	Government aims to settle legal, regulatory, and institutional issues through system reforms. Elaborated Draft PPP Law is part of such reforms.
Unclear offtake agreements for HPP. At the core of investor reluctance to invest in a hydropower is the lack of certainty surrounding energy offtake arrangements. The existing guarantee on guaranteed purchase of electricity was sufficient to assure investors in some of the smaller hydropower sites that there will be a market for their energy, but for larger sites, this offtake arrangement does not adequately reduce demand risk for potential investors. Foreign investors interested in some of the larger hydropower sites, such as Nenskra and Namakhvani, have indicated that they would need to have a long-term offtake agreement guaranteed by the government.	Energy sector reform will cover these matters.
Lack of regulatory framework for transmission capacity allocation. Government's "first come, first served" principle for capacity allocation of the interconnection capacity to new HPPs does not make it clear how congestion will be managed if multiple new HPPs require more capacity than is available. The total of the generating capacity listed in the existing MOUs is more than what could be transmitted on the line. The Partnership Fund owns the Georgian State Electrosystem and therefore could conceivably guarantee transmission access, but the terms for acquiring such guarantees are unclear. Moreover, generation from large HPPs that are currently under development would utilize all of the full capacity of the existing line.	This matter is to be addressed through an updated legal framework for the energy sector. The details are not yet publicly available.

HPP = hydropower plant, MOU = memorandum of understanding, PPP = public-private partnership.

Sources: Mott MacDonald; Begiashvili & Co. Limited.

2.3 Other Sectors

A list of infrastructure projects that may be implemented as PPPs (for sectors not covered in earlier sections) is presented in Table 2.6.

Table 2.6: PPP Pipeline of Projects from Other Sectors in Georgia

No.	Project Name	Implementing Agency	Status	Value (\$ million)
1	Tbilisi Energy-Efficient Street Lighting	Municipality of Tbilisi	Planning	32.0
2	Tbilisi Logistics Centre	Ministry of Economy and Sustainable Development	Feasibility study conducted	95.4
3	Kutaisi Logistics Centre	Ministry of Economy and Sustainable Development	Feasibility study conducted	75.2
4	Anaklia Deep Sea Port	Government of Georgia	Developer for Phase 1 selected	2,500.0
5	Tbilisi Cluster Healthcare PPP Transformation	Ministry of Health, Labour and Social Affairs	Planning	206.8
6	East-West Highway Corridor O&M PPP contract	Ministry of Regional Development and Infrastructure	Preliminary study conducted	130.0
7	Tbilisi Bus Rapid Transit	Municipality of Tbilisi	Preliminary study conducted	no data

O&M = operation and maintenance, PPP = public-private partnership.

Sources: Georgian National Investment Agency. 2017. Georgia: Investment Opportunities. http://www.investingorgia.org/en/ajax/downloadFile/946/Georgia_-_Investment_Opportunities_Catalogue_2017. IG Global database. <http://www.ijglobal.com> (accessed 16 January 2018).

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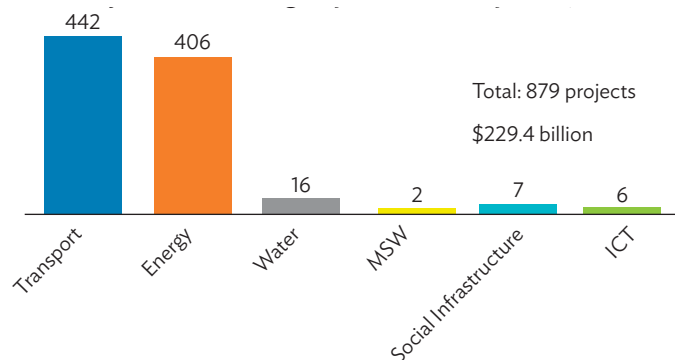
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3. INDIA

From the perspective of the number and the overall value of projects, India¹ has emerged as one of the major public-private partnership (PPP) markets within South Asia. The Government of India has considered the PPP route in almost all sectors, including transportation, energy, urban utilities, and social infrastructure. Since 1990, there have been 879 projects with a total investment of \$229 billion that have reached financial closure. More than 90% of the projects have been in the transport and energy sectors Figure 3.1

Figure 3.1 PPP Projects in India that Have Reached Financial Close, 1990–2017



ICT - information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Sources: IJGlobal. *IJGlobal Project Finance and Infrastructure Journal*. <http://www.ijglobal.com>;
World Bank Group. 2015. *World Bank Asia Pacific Private Participation in Infrastructure (PPI) Database*.
<http://ppi.worldbank.org/>.

Although India does not have a dedicated centralized legislation on PPP, many states (including all major states) have their own explicit legal framework for infrastructure development with private sector participation. In addition, multiple guidelines, policies, and manuals have been developed by the Government of India on recommended best practice for PPP development and implementation. The government has also taken a series of measures toward improving the PPP environment in the country, including:

¹ The *PPP Monitor* is envisaged to be a dynamic product and comments for improving data quality are welcome and can be incorporated in future editions. It should also be noted that the report is using standardized definitions which may not match a particular developing member country's definitions. For the meaning of each indicator, please refer to the Appendix.

- a dedicated PPP website (www.pppinindia.gov.in) of the Department of Economic Affairs (DEA) that provides an inventory of all PPP projects;
- a PPP tool kit for ministries to aid decision making at all key stages of PPP project cycle;
- Standardized model bidding documents such as Request for Qualification, Request for Proposal, and Model Concession Agreements for different sectors;
- a Post-Award Contract Management Manual for highway, port, and school sectors;
- a PPP Cell established in 2006 in the DEA under the Ministry of Finance;
- Available mechanism of government support to enhance bankability of the projects, including Viability Gap Fund;
- the India Infrastructure Project Development Fund created in 2007–2008 to assess projects that require fiscal support;
- a hybrid annuity model (HAM) launched in 2005 by the government to further improve private participation in the road sector. Its primary aim was to safeguard developers and lenders from the risks or challenges they faced in the conventional models such as design–build–finance–operate–transfer or build–operate–transfer (BOT) models. In 2016, the National Highway Authority of India (NHAI) approved the HAM, and from January 2016 to March 2017, around 48 projects were awarded with an effective length of around 12,000 lane kilometers and bid project cost of around Rs490,000 million.²
- Apart from HAM, the government has also introduced the Toll Operate Transfer (TOT) model in the road sector, and introduced programs such as the Sagarmala Programme for port-led development, the Station Redevelopment Programme in the railway sector, and launched the Regional Connectivity Scheme in the civil aviation sector to attract private investments.³
- a new PPP policy, announced by the government on 21 September 2017 to promote private investments in affordable housing that allows central assistance of up to Rs250,000 per house to be built by private builders on private land. It further provides PPP options in eight ways for the private sector to invest in the affordable housing sector.⁴

Foreign direct investment (FDI) in most sectors is on the automatic route, implying 100% FDI in almost all infrastructure sectors. Foreign sponsor participation increased in 2017; however, cumulative share to total number of projects stayed constant at 18% (Figure 3.2). Maximum foreign sponsor participation was observed in the water, transport, and energy sectors (Figure 3.3).

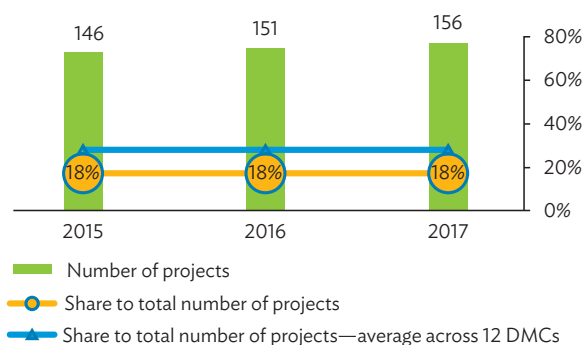
Institutional PPPs, in general, are discouraged, except for well-articulated strategic reasons. It is noted that there has been hardly any increase in state-owned enterprise (SOE) participation in PPP projects since 2015 (Figure 3.4). Such hybrid arrangements are currently allowed by the government for airports and ports, and the SOE has to be a minority partner in the special purpose vehicle (SPV).

² CARE Ratings, Professional Risk Opinion. 2017. *Hybrid Annuity Model – The Journey So Far....* Credit Analysis and Research Limited (CARE). p. 1. 15 November.

³ Federation of Indian Chamber of Commerce and Industry. India PPP Summit 2017. Revival of PPP Momentum in the Transport.

⁴ Government of India, Ministry of Housing and Urban Affairs. 2017. *Centre announces new PPP Policy to promote private investments in affordable housing*. 21 September. <http://pib.nic.in/newsite/PrintRelease.aspx?relid=170988>.

Figure 3.2: PPP Projects in India with Foreign Sponsor Participation, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Figure 3.3: Share of PPP Projects in India with Foreign Sponsor Participation by Sector, 1990–2017

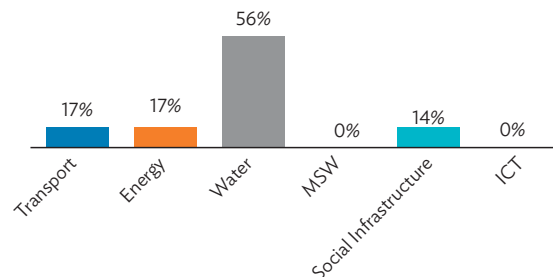
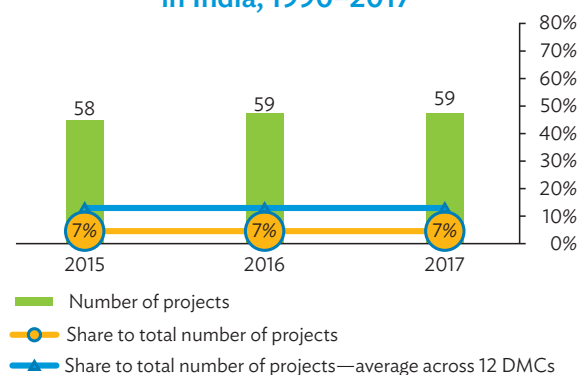


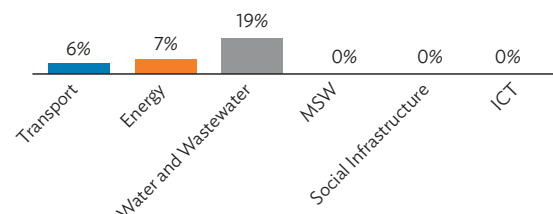
Figure 3.4: Institutional PPP Projects in India, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Figure 3.5: Share of Institutional PPP Projects in India with Foreign Sponsor Participation by Sector, 1990–2017



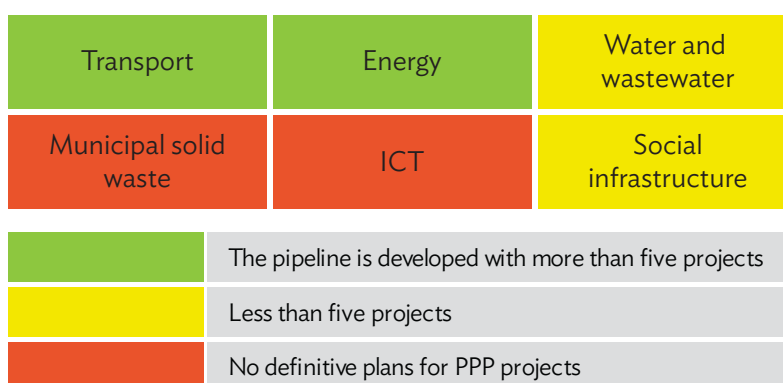
The Government of India harnesses private sector efficiencies through contracts based on an availability-/performance payment basis. In India, 39% of the projects were observed to be on an availability-/performance payment basis, of which about 80% of the projects belong to the energy sector.

Foreign lenders participated in only 2% of all projects, mostly in the transport, energy, and social infrastructure sectors (Figure 3.5). Similarly, the share of international financing institution/export credit agency support in the financing has not been significant (6%), and appeared largely in the energy sector.

There have been well-developed PPP pipelines in the transport (especially roads) and energy sectors (Figure 3.6).

As of the end of 2017, the overwhelming majority of PPP projects under various stages of development had been in the transport sector (Figures 3.7 and 3.8).

Figure 3.6: Availability of PPP Pipelines in India by Sector^a



ICT = information and communication technology, PPP = public-private partnership.

Note:

^a The projects included are published in the official sources.

Source: Mott MacDonald.

Figure 3.7: PPP Projects in India Currently In Preparation, 2017

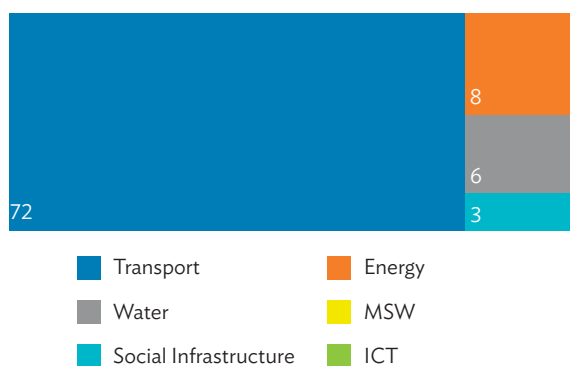
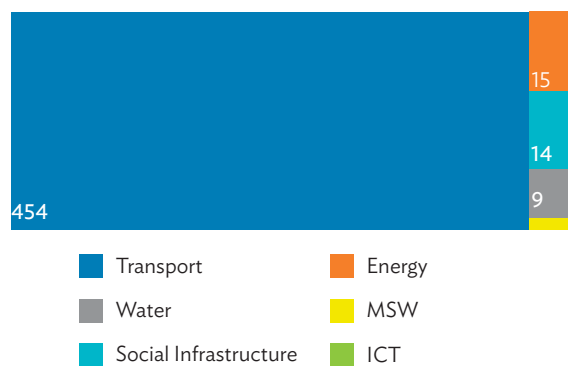


Figure 3.8: PPP Projects in India Currently In Procurement, 2017



ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Key Developments from 2016

There were no significant changes from 2016 in the PPP environment in India.

3.1 Country Profile

3.1.1 Regulatory Framework

3.1.1.1 PPP Law

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

	1996–2016	1996–2017	In 2017
Number of PPP projects that reached financial close under the latest PPP law	1,306	1,354 ^a	48

Note:

^a Public Private Partnerships in India. List of all PPP Projects. <https://www.pppinindia.gov.in//list-of-all-ppp-projects> (accessed 30 January 2018).

India does not have dedicated central legislations on PPP. In the absence of a unified PPP law or policy and a national-level PPP institution, the framework of PPP in India remains heterogeneous. However, in the last 3 years, the Government of India has taken measures to strengthen the PPP framework by formulating new innovative PPP models, such as the HAM and the toll-operate-transfer models, to revive the interest of private players and financial institutions in PPP projects, especially in the road sector.⁵ The Mainstreaming Program of the DEA and The Asian Development Bank (ADB) also helped to build a PPP enabling environment in the states and the key central line ministries.

PPP for procurement of goods and services is governed by a combination of the Constitution of India, and certain rules, procedures, and manuals as set out below:

- General Financial Rules, 2017
- Delegation of Financial Powers Rules, 1978
- Manual for Procurement of Goods, 2017
- Central Vigilance Commission Guidelines relating to certain matters, including guidelines on prequalification criteria, increasing transparency in procurement process, and integrity pact between the procurer and the prospective bidders
- specific PPP legislations of many states have

⁵ Government of India. NITI Aayog. 22 November 2017. Rebooting PPP in India.

To aid in project preparation and decision making, the Government of India has issued a series of guidance papers and a PPP Structuring Tool Kit, which provide sector-specific guidelines for five sectors: state highways, water and sanitation, ports, solid waste management, and urban transport. This tool kit helps to improve the quality of PPP projects being developed and covers the entire life cycle of PPP projects. It has been made available online on the DEA website (www.pppinindia.gov.in). The documents relating to detailed guidelines for appraisal/approval procedure of the PPP projects in the central government sector are listed below:

- Procedure for approval of PPP projects and guidelines for formulation, appraisal, and approval of PPP projects in central sector—notification dated 12 January 2006
- Guidelines for formulation, appraisal, and approval of PPP project costing less than ₹1,000 million
- Guidelines for formulation, appraisal, and approval of PPP projects (i) of all sectors costing more than ₹1,000 million and less than ₹2,500 million and (ii) under National Highways Development Project (NHDP) costing more than ₹2,500 million and less than ₹5,000 million
- A compendium of guidelines for formulation, appraisal, and approval of central sector PPP projects

The procedures defined in these guidelines are not binding, but the intention is for them to be observed for all central sector projects.

Outside of the central government, states are encouraged to put in place a similar mechanism.

Certain states (e.g., Gujarat, Punjab, Bihar, and Andhra Pradesh) have already developed specific legal frameworks to enable private partnership in infrastructure where there are dedicated legal PPP instruments. Some states such as Karnataka, Odisha (formerly known as Orissa), Maharashtra, and Assam have specific policy frameworks for private sector participation in infrastructure. Some states (e.g., Odisha and Madhya Pradesh) have developed a workflow for PPP project approvals, usually chaired by the chief secretaries of the respective states. These empowered committees have the representation of senior administrative officials to streamline the approvals process.

The Constitution of India divides the responsibility of legislation between the National Parliament and state legislature bodies. The Indian Parliament is competent to make laws on matters listed in the Union List, which includes ports, airports, railways, national highways, inland waterways, telecommunication, oil fields, and mineral resources. The state legislature bodies are competent to make laws on matters listed in the state list, which includes police services, prisons and corrective facilities, regulation of local government, public health and sanitation, state highways, city roads, and water supply and irrigation. Some states which have an explicit legal framework for infrastructure, including for private investment in public infrastructure, are as follows:

- Andhra Pradesh—The Andhra Pradesh Infrastructure Development Enabling Act 2001
- Assam—The Assam Policy on PPP in Infrastructure Development
- Bihar—The Bihar Infrastructure Development Enabling Act 2006
- Chhattisgarh—Guidelines for Formulation, Appraisal, and Approval of PPP projects in Chhattisgarh, 2013
- Goa—The Goa Policy on PPP

- Gujarat—Gujarat Infrastructure Development Act 1999 amended in 2006
- Haryana—Haryana PPP Policy
- Karnataka—The Karnataka Infrastructure Policy 2007 amended in 2015;⁶ Guidelines for Procurement of PPP Projects through the Swiss Challenge Proposals Route, 2010
- Kerala—Policy for PPP in Kerala, 2014
- Odisha—The Orissa PPP Policy, 2007
- Punjab—The Punjab Infrastructure Development and Regulation Act 2002
- Rajasthan—Rajasthan Infrastructure Development Fund with an initial corpus of \$500,000
- Tamil Nadu—Tamil Nadu Infrastructure Development Act, 2002
- Uttar Pradesh—Uttar Pradesh Infrastructure and Industrial Investment Policy, 2012
- Uttarakhand—Uttarakhand PPP Policy, 2012
- West Bengal—The West Bengal Policy on Infrastructure Development through PPP 2003
- Rajasthan—Social Sector Viability Gap Funding Scheme, 2007
- Madhya Pradesh—Scheme and Guidelines for Madhya Pradesh Project Development Fund, 2009
- Madhya Pradesh—Guidelines for PPP, 2009
- Madhya Pradesh—PPP Policy (draft stage)
- Gujarat State Viability Gap Funding Scheme, 2007

The Constitution (73rd Amendment) Act 1992 has decentralized responsibilities of urban local bodies (ULBs), which includes water supply, urban roads and bridges, public health and sanitation, solid waste management, and other public amenities.

3.1.1.2 PPP Type

	2016	2017
Number of PPP types defined in the PPP regulations	5	5 ^a

Note:

^a Public Private Partnerships in India. *PPP Tool Kit for Improving PPP Decision-Making Processes*. <https://www.pppinindia.gov.in/toolkit>.

The DEA indicates the following as major PPP modal families and their main variants:

- Management contracts: Management contract with and without rehabilitation expansion
- Lease Contracts: build–lease–transfer (BLT), build–transfer–lease (BTL), build–own–lease–transfer and lease–design–operate–transfer
- Concessions
- BOT: design–build–operate (DBO), BOT, design–build–finance–operate–transfer, BOT annuity
- Build–own–operate–transfer (BOOT): design–build–own–operate–transfer (DBOOT), build–own–operate (BOO)

⁶ Amended vide Government Order No. IDD 07 ITS 2013, Bangalore Dated 30 October 2015.

The Government of India does not recognize short-term service contracts (up to 3 years), engineering-procurement-construction (EPC) contracts, and divestiture of assets as forms of PPP.

Other variants of PPP models in use include the following:

- Operation and maintenance
- Lease, develop, operate contract

As part of a major step toward revitalizing the PPP model to attract private investments, the government has introduced the HAM and the TOT model in the road sector, the Sagarmala Programme for port-led development, the Station Redevelopment Programme in the railway sector, and the Regional Connectivity Scheme in the civil aviation sector.⁷

Under the HAM, the life cycle cost (net present value of the quoted project cost and net present value of the operation and maintenance cost for operation period) will be the bid parameter for selection of the concessionaire. The project cost will be inflation-indexed through a Price Index Multiple, which is the weighted average of wholesale price index (WPI) and consumer price index in the ratio of 70:30. In case of road projects, NHAI as the pertinent authority will pay 40% of the project cost in five equal installments during the project tenure. The concessionaire will have to initially bear the balance 60% of the project cost through a combination of equity and debt, which will be paid by the NHAI in semiannual installments after the completion of the project construction along with an interest at bank rate plus 3%.

3.1.1.3 Eligible Sectors

	2016	2017		2016	2017
Transport			Energy		
Roads	✓	✓	Power generation	✓	✓
Railways	✓	✓	Power transmission	✓	✓
Ports	✓	✓	Power distribution	✓	✓
Airports	✓	✓	Oil and gas	✓	✓
Water and wastewater	✓	✓	Information and communication technology	✓	✓
Municipal solid waste	✓	✓	Social infrastructure	✓	✓

Source: Government of India. Department of Economic Affairs. 2013. *Scheme and Guideline for Financial Support to Public Private Partnership in Infrastructure*.

PPP guidelines for formulation, appraisal, and approval of PPP projects are applicable to all PPP projects sponsored by the central government ministries, central public sector undertakings, and statutory authorities or other entities under their central administrative control.

⁷ Federation of Indian Chamber of Commerce and Industry. *Revival of PPP momentum in the transport sector*. Indian PPP Summit 2017.

3.1.1.4 Other Applicable Restrictions

	2016	2017
Project funding structure	Bidders are evaluated during the Request for Qualification stage, both technically and financially. Financial Capacity: applicants should have a minimum net worth equivalent to 25% of the estimated capital cost of the project for which bid is invited. Technical Capacity: measured either from the construction work undertaken/ commissioned by it or from revenues of BOT/ BOLT/BOO projects, or both, during the 5 years preceding the application date.	
Project capital investment size	None	None

BOLT = build-own-lease-transfer, BOO = build-operate-own, BOT = build-operate-transfer.

Source: Government of India, Planning Commission. Model RFQ Document. Request for Qualification PPP.

3.1.1.5 Unsolicited Bids

	2016	2017
Acceptance of unsolicited proposals	✓ ^a	✓ ^b
Eligibility of the project proponent to have:		
Competitive advantage at bid evaluation	✓	✓
Swiss challenge	✓	✓
Compensation of the project development cost	✓	✓
Government support for land acquisition and resettlement cost	✓	✓
Government support in the form of viability gap fund and guarantees	✓	✓

Notes:

^a Only in some states.

^b Only in some states.

Although possible, unsolicited bids/Swiss challenge proposals are not preferred by the government, owing to the lack of transparency, asymmetry of information, and lack of fair and equal treatment to potential bidders. The term “Swiss challenge” has been used in one case as a misnomer for projects bid out as per standard procedures but with the “Design” component open for challenge.

However, some states in India (e.g., Gujarat and Andhra Pradesh) have adopted Swiss challenge approach/unsolicited proposals in their respective state PPP acts and policies in different ways. Today, a number of other states have also embraced this procurement methodology. Rajasthan and Madhya Pradesh, for instance, have included it in their guidelines for infrastructure projects.

Bihar, Karnataka, and Punjab have also come out with guidelines, policies, and procedures for treating unsolicited bids. Therefore, their approach to unsolicited bids will differ from that of the DEA and will be applicable to sectors under the state list (as defined previously) or which are under control of state legislation.

3.1.1.6 State-Owned Enterprise Participation

	2016	2017
Are institutional PPP arrangements allowed (e.g., joint venture between government or state-owned enterprises and private firms as a special purpose vehicle company)?	✓ ^a	✓

Note:

^a Hybrid arrangements are allowed only if SOE is a minority partner in the SPV, and only for strategic or specific reason that justify SOE participation.

	1990– 2016	1990– 2017	In 2017
Cumulative PPP projects with SOE participation (number)	59	59	–
Cumulative PPP projects with SOE participation (as a share to total number of PPP projects)	7%	7%	–

In India, central public sector enterprises are companies in which the direct holding of the central government or other such enterprises is 51% or more. As of 31 March 2016, there were 320 central public sector enterprises.⁸

The indication of hybrid arrangements (joint venture between SOE and private firms for PPP, SPV) being allowed (as tick marks in the table above) is based on actual past or present scenarios. Such hybrid arrangements are currently allowed by the government for airports and ports, and the SOE has to be a minority partner in the SPV.

The report by the committee on “Revisiting and Revitalising PPP Model of Infrastructure,” dated November 2015, states that, in general, such participation is discouraged, except for well-articulated strategic reasons.

⁸ Government of India, Ministry of Heavy Industries and Public Enterprises, Department of Public Enterprises. March 2017. *Public Enterprises Survey 2015–16*. Vol. 1. <http://dpe.gov.in/pesurveyreports/public-enterprises-survey-2015-16>.

3.1.1.7 Land Rights

	2016	2017
Which of the following is permitted to the private partner?		
Transfer land lease/use/ownership rights to third party	x	x
Use leased/owned land as collateral	x	x
Mortgage leased/owned land	x	x
Is there a legal mechanism for granting wayleave rights, for example, laying water pipes or fiber cables over land occupied by persons other than the government or the private partner?	✓	✓
Is there a land registry/cadastre with public information on land plots?	✓	✓
Which of the following information on land plots is available to the private partner?		
Appraisal of land value	✓	✓
Landowners	✓	✓
Land boundaries	✓	✓
Utility connections	✓	✓
Immovable property on land	✓	✓
Plots classification	✓	✓

In India, land is a subject within the powers of the state government as per the Constitution of India and, hence, property laws in India may differ from state to state. When a person acquires or owns an immovable property, the law also gives that person the right to use, lease, sell, rent or transfer, and/or gift the land. The owner also has a right to mortgage an immovable property as a security for loans.

The key regulations governing land in India are as follows:

- The Real Estate (Regulation and Development) Act (2016), which seeks to protect investors and boost investments in the real estate sector by ensuring sale of plot, apartment, or building, or real estate project, in an efficient and transparent manner;
- The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (Land Acquisition Act);
- The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Rules (2015);
- Transfer of Property Act (1882)—a legislation which regulates the transfer of property in India;

- The Registration Act (1908)—procedure for registration of documents related to the transfer of immovable properties with the designated registration authority. It ensures that all documents regarding the sale and purchase of land are recorded and maintained;
- Indian Easements Act (1882);
- The Indian Contract Act (1872)—determines the circumstances in which obligations of the parties to a contract are legally binding on them; and
- The Indian Stamps Act (1899).

In the case of PPP, the Land Acquisition Act provides that

- the appropriate government acquires land for PPP projects, where the ownership of the land continues to be vested with the government; and
- when private companies acquire land for PPP projects, the prior consent of at least 70% of those affected families shall be obtained through a process as may be prescribed by the appropriate government.

Transfer of ownership rights to a third party, use of leased lands as collateral, and mortgage of leased land are usually not permitted under model concession agreements of PPP projects.

3.1.1.8 Environmental and Social Issues

	2016	2017
Is there a local regulation establishing a process for environmental impact assessment?	✓	✓
Is there a legal mechanism for the private partner to limit environmental liability for what is outside of its control or caused by third parties?	✓	✓
Is there a local regulation establishing a process for social impact assessment?	✓	✓
Is there involuntary land clearance for PPP projects?	✓	✓

The Ministry of Environment, Forest, and Climate Change has stipulated that environmental impact assessments (EIAs) are mandatory for infrastructure projects. The EIA Notification was first issued in 1994 while the most recent one was issued in 2006.

All projects are broadly classified into two categories (depending on the spatial extent of potential impacts on human health, and natural and human-made resources): classifications of projects under Categories A and B are based on the pollution intensity or locational aspects. Category A projects are approved by the central government from the Ministry of Environment, Forest and Climate Change, and Category B projects are cleared by State/Union Territory Environmental Impact Assessment Authority. The maximum timeline stated in the EIA Notification for the various stages of obtaining environmental approvals is 210 days (excluding the time required to undertake the EIA study).

In India, social impact assessment was mandated in 2013 by the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013.⁹ Any major project is required to conduct such assessment within 6 months from the project start date. For projects requiring land acquisition, the project developers must obtain consent from a majority of landowners. In the case of PPP projects, consent is required from 70% of landowners. After land acquisition, the project owners are required to compensate the affected individuals with a minimum amount of two times the market rate for urban land and a minimum of four times the value rate for rural land.

The state has legal powers under “the principle of eminent domain” for the acquisition of private property, and this can lead to involuntary displacement of people. The National Resettlement and Rehabilitation Policy (2007), provides for rehabilitation and resettlement of persons affected by the acquisition of land for projects of public purpose or involuntary displacement due to any other reason.

3.1.1.9 Foreign Investor Participation Restrictions

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Transport			Energy		
Roads	100%	100%	Power generation	100%	100%
Railways	100%	100%	Power transmission	100% ^a	100%
Ports	100%	100%	Power distribution	100%	100%
Airports	100%	100%	Oil and gas	100%	100%
Water and wastewater			Municipal solid waste	100%	100%
Bulk water supply and treatment	100%	100%	Social infrastructure		
Water distribution	100%	100%	Healthcare infrastructure	100%	100%
Wastewater treatment	100%	100%	Healthcare services	100%	100%
Wastewater collection	100%	100%	Education infrastructure	100%	100%
Information and communication technology			Education services	100%	100%
Fixed line infrastructure	100%	100%	Government buildings	0%	0%

⁹ *The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act 2013*. Chapter II. Clause 4(1). <http://www.legislative.gov.in/sites/default/files/A2013-30.pdf>.

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Fixed line services	100%	100%	Prisons and correction centers	0%	0%
Wireless/mobile infrastructure	100%	100%	Social housing	0%	0%
Wireless/mobile services	100%	100%	Sport and leisure facilities	100%	100%

Note:

^a A total of 100% FDI for power transmission, distribution, and generation, and 49% permissible for power exchange (FDI limit 26% and FII limit 23%).

Foreign investment into an Indian entity on a strategic basis is subject to foreign direct investment (FDI) policy. The Government of India formulates FDI policy on a yearly basis. Currently, the consolidated FDI policy dated 28 August 2017 is in effect, along with certain press notes issued by the Department of Industrial Policy and Promotion, Ministry of Commerce and Industry. Foreign investors can invest directly in India either on their own or through joint ventures in majority of sectors. There are few exceptions, indicated through a limited list of activities, where foreign investment is prohibited, as indicated above.

In telecom services, FDI of up to 100% is allowed, of which up to 49% can be through the automatic route—i.e., without prior approval of the government or the Reserve Bank of India (RBI)—and the balance can be through Department of Telecommunications, Ministry of Communications consent.¹⁰

Is there any restriction for foreign investors on?

	2016	2017
Land use/ownership rights as opposed to similar rights of local investors	yes	yes
Currency conversion	no	no

Any foreign transactions involving foreign exchange is subject to the provisions of the Foreign Exchange and Management Act, 1999 (FEMA) and its amendment in 2002.

The act states that foreign nationals can acquire land or property in India only under the following circumstances:

- Where the acquisition of property is by an Indian company owned by a foreign national, which has been set up to conduct activities permitted under the FDI norms
- The foreign national is a person of Indian origin

¹⁰ Garg, S. 2017. *Abolition of the Foreign Investment Promotion Board*. <http://www.fifp.gov.in/Forms/OMabolitionFIPB.pdf>.

In all other circumstances, applications must be made to the RBI, and these are considered on a case-by-case basis subject to the requirements of the Foreign Exchange and Management Act. In addition to these provisions that apply across India, states have specific laws that regulate the purchase or acquisition of property in that state.

The Foreigners Act, 1946; the Registration of Foreigners Act, 1939; and the Citizenship Act, 1955, together with rules and amendments, regulate the entry, movement, and stay of foreigners in India. The granting of employment visas by the Indian Bureau of Immigration (under the Ministry of Home Affairs of the Government of India) is allowed only to highly skilled and/or qualified professionals who are being engaged or appointed by a company or organization in India. Furthermore, employment visas shall not be granted for jobs for which qualified Indians are available.

Import of capital goods, machinery, or equipment (excluding second-hand machinery) is allowed subject to the conditions defined in the FDI policy. The FDI policy, dated 28 August 2017, provides that a foreign investor in the construction development sector will be permitted to exit and repatriate foreign investment before the completion of project under automatic route provided that a lock-in period of 3 years, calculated with reference to each tranche of foreign investment, has been completed. However, transfer of stake from one nonresident to another nonresident without repatriation of investment will neither be subjected to any lock-in period nor to any government approval. Lock-in periods do not apply to hotels and tourist resorts, hospitals, special economic zones, educational institutions, old-age homes, and investment by nonresidential Indians.

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	151	156	5
PPP projects with foreign sponsor participation (as a share to the total number of PPP projects)	18%	18%	21%

3.1.1.10 Dispute Resolution and Enforcement Mechanism

	2016	2017
Can a foreign law be chosen to govern PPP contracts?	✓ ^a	✓
What dispute resolution mechanisms are available for PPP agreements?		
Court litigation	✓	✓
Local arbitration	✓	✓
International arbitration	✓	✓

	2016	2017
Has the country signed New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?	✓	✓

Note:

^a Yes, subject to meeting certain conditions. Model concession agreement indicates that in case of dispute, arbitration prescribed by the International Centre for Alternative Dispute Resolution, New Delhi, shall apply. Procedure shall be in accordance with the Arbitration and Conciliation Act. However, the Act, as amended in 2015, states that foreign awards can be enforced subject to some conditions.

The legal framework for PPP in India ranges from the Constitution of India to rules and regulations notified from time to time by various state instrumentalities. In addition to pieces of legislation relevant to a particular sector, such as the National Highway Authority of India (NHAI) Act, 1988, laws governing normal commercial transactions such as the Indian Contract Act, 1872; Sale of Goods Act, 1930; and Negotiable Instruments Act, 1881, will also have a bearing on PPP arrangements, as will various statutes.

To enhance transparency in PPP projects, the DEA proposes the setting up of a dedicated dispute resolution mechanism to address issues related to bidding and award of PPP projects. However, this has yet to be implemented.

Various alternative methods of dispute resolution, such as amicable settlement, conciliation mediation, arbitration, and expert adjudication, are generally provided for in the concession agreements. The concession agreement for any project typically specifies the dispute resolution process that would be adopted and the occurrence of a dispute needs to first be notified in writing by one party to the other.¹¹

The Society for Affordable Redressal of Disputes was initiated by the NHAI and the National Highways Builders Federation for settlement of disputes through arbitration, the objective being to reduce delays and expenses occurred by disputes between NHAI and its concessionaires.

The Government of India signed the New York Convention (Convention on the Recognition and Enforcement of Foreign Arbitral Awards, 1958) with the declaration that it will apply for the recognition and enforcement of awards made only in the territory of a state, which is party to this convention. The government further declared that it will apply the convention only to differences arising out of legal relationships, whether contractual or not, which are considered as commercial under the law of India.

With the intention to make arbitration a preferred mode for settlement of disputes, the government has amended the Arbitration and Conciliation Act (1996) to the Arbitration and Conciliation (Amendment) Act, 2015. The act stipulates that the arbitral tribunal shall make its award within a period of 12 months. Provision has been made for a fast-track procedure for conducting arbitration.¹²

¹¹ Public Private Partnerships in India. PPP Tool Kit for Improving PPP Decision-Making Processes. <https://www.pppinindia.gov.in/toolkit/ports/module2-p4-oirtcm-dr.php?links=oirtcm1a>.

¹² Government of India. Ministry of Law and Justice. 2016. *The Arbitration and Conciliation (Amendment) Act 2015*. New Delhi. January.

3.1.1.11 Lender's Security Rights

	2016	2017
Does the law specifically enable lenders the following rights?		
Security over the project assets	✓	✓
Security over the land on which they are built (land use right)	×	×
Security over the shares of a PPP project company	✓	✓
Can there be a direct agreement between the government and lenders?	×	×
Do lenders get priority in the case of insolvency?	✓	✓
Can lenders be given step-in rights?	✓	✓

The PPP Guide for Practitioners issued by the DEA, dated April 2016, states that in the case of PPP projects, funding is through project finance arrangement under which lenders generally rely either exclusively or mainly on the cash flow expected to be generated by the project to recover loans and earn a return on their investments. The arrangement is also known as nonrecourse or limited recourse funding that has the following features:

- No or limited recourse to sponsor's assets,
- Bankability based on the debt service capacity of the project, and
- Debt service capacity based on future cash flows of a single activity

The Master Circular issued by the RBI on "Prudential Norms on Income Recognition, Asset Classification and Provisioning pertaining to Advances," dated 1 July 2015, states that in the case of PPP projects, the debts due to the lenders may be considered as secured to the extent assured by the project authority in terms of the concession agreement, subject to the following conditions:

- User charges/toll/tariff payments are kept in an escrow account where senior lenders have priority over withdrawals by the concessionaire.
- There is sufficient risk mitigation, such as a predetermined increase in user charges or increase in concession period, in case project revenues are lower than anticipated.
- The lenders have a right of substitution in case of concessionaire default.
- The lenders have a right to trigger termination in case of default in debt service.
- Upon termination, the project authority has an obligation of (i) compulsory buyout and (ii) repayment of debt due in a predetermined manner.

Some of the state PPP legislations and policies provide for facilitation of securitization where the government agency or local authority may facilitate a developer to securitize project receivables and project assets in favor of lenders, subject to terms fixed by the government or state infrastructure authorities.

The PPP guidelines by the DEA provide for a substitution agreement or tripartite agreement among the lender, the private partner, and the public entity, and, in case a project requires financial assistance from the Ministry of Finance (MOF), the DEA is party to the tripartite agreement.

3.1.1.12 Termination and Compensation

	2016	2017
Does the law specifically enable compensation payment to the private partner in case of early termination due to:		
Public sector default or termination for reasons of public interest	✓	✓
Private sector default	✓	✓
Force majeure	✓	✓
Does the law enable the concept of economic/financial equilibrium?	✓	✓
Does the law enable compensation payment to the private partner due to:		
Material adverse government action	✓	✓
Force majeure	✓	✓
Change in law	✓	✓

Sector-specific model concession agreements (MCAs) provide a framework for PPP agreements. The MCA indicates that in case of termination, the following shall be applicable:

- Political force majeure and defaults by the government are proposed to qualify for adequate compensatory payments to the concessionaire and will thus guard against any discriminatory or arbitrary action by the government.
- In the event of termination, the project debt would be fully protected by the government, except where termination occurs due to default by the concessionaire or due to nonpolitical force majeure events, where it is only partially protected.

3.1.1.13 Government Support

	2016	2017
Is project development fund available?	✓	✓
Land acquisition support from the government:	✓	✓
Resettlement and/or compensation cost to residents at the project site	✓	✓
Imposed limits on time frame to complete land acquisition (day)	×	×
Is there a dedicated agency to streamline land acquisition?	×	×
Exemption from/reduction of land use fees	✓	✓

	2016	2017
Viability gap fund (VGF)	✓	✓
Limits to VGF as a percentage of projects capital cost	40%	40%
Government guarantees:^a	✓	✓
Currency inconvertibility and transfer risk	✓	✓
Foreign exchange risk	✓	✓
War and civil disturbance risk	✓	✓
Breach of contract risk	✓	✓
Regulatory risk	✓	✓
Expropriation risk	✓	✓
Government payment obligation guarantee	✓	✓
Credit guarantees	✓	✓
Minimum demand/revenue guarantee	✓	✓
Availability-/performance-based payment contracts	✓	✓
Tax subsidies	✓	✓

Note:

^a Section 13.3 of the BOT Law IRR explicitly states what type of guarantees could be provided (marked as green in the table). Where regulation is silent on the respective type of guarantee and precedents in practice are unknown, the indicator is marked as red.

The government has notified through circulars the sectors eligible for financial support under viability gap fund (VGF), which includes all of the sectors covered in this chapter. These sectors figure in the harmonized List of Infrastructure subsectors as notified by the government.

For government guarantees, the approach between central sectors and some state sectors is variable. In the case of central sectors, government guarantees are not defined explicitly for PPP projects and are part of the risk mitigation strategy adopted on a project-specific basis.

Some states (e.g., Andhra Pradesh and Bihar) have infrastructure development acts which clearly define that the state government provides for treatment of risks in the concession agreement. For instance, the risks covered under Bihar State Infrastructure Development Enabling Act (2006), include the following:

- Construction period risk such as land expropriation, cost overruns, increase in financing cost, time and quality risk, contractor default risk, default by developer, and environmental damages,
- Operation period risk which includes government agency default, developer default, termination of concession agreement by the government, environmental damage, labor risk, and technology risk,

- Market and revenue risk which includes insufficient income from user levies and insufficient demand for facility,
- Finance risk which includes inflation, interest rates, and currency risk,
- Legal risk which includes change in law, title/lease risk, security structure, insolvency of developer, and breach of financing documents, and
- Miscellaneous risk which includes direct political force majeure, indirect political force majeure, and natural force majeure.

Details of available government support for PPP projects are provided in Table 3.1.

Table 3.1: Available Government Support for PPP Projects in India

Government Support Type	Comments
PDF	<p>The Ministry of Finance, in the budget for 2007–2008, had announced the setting up of a revolving fund known as the India Infrastructure Project Development Fund with the amount of ₹1,000 million (which can be supplemented further, if required, with the approval of the finance ministry) to quicken the process of project preparation and development.</p> <p>The fund's primary objective is to support the development of credible and bankable PPP projects. It provides a mechanism through which a sponsoring authority will be able to source funding to cover a portion of the PPP transaction costs, thereby reducing the impact of costs related to procurement on their budgets.</p> <p>This fund can cover the expenses of feasibility studies, environment impact studies, financial structuring, legal reviews and development of project documentation, concession agreement development, commercial assessment studies (including traffic studies, demand assessment, capacity to pay assessment), grading of projects, fees of consultants and advisors, etc., under the project development stage.</p> <p>The Infrastructure Project Development Fund contributes up to 75% of the project development expenses to the sponsoring authority as an interest-free loan and on successful completion of the bidding process, the project development expenditure would be recovered from the successful bidder. In the case of failure of the bidding process, it will be recovered from the sponsoring authority.^a</p> <p>State governments have also implemented PDF on similar schemes.</p>
Land acquisition and resettlement	<p>Acquisition of land for the development of a project under the PPP framework by the public entity prior to commencement of the bidding process has been supported by the Government of India.</p> <p>One of the key factors that determines the approval of the Public Private Partnership Approval Committee for the development of the PPP project includes the extent of land availability (usually must not be less than 60%) with the public entity for the purpose of project development.</p> <p>The land acquisition process includes an assessment of the land required for a project, notification, and eventual acquisition, and the ability of the government or the line department to fulfill the obligation to provide land without any encumbrance or encroachments. Shifting of utilities from the project site and the acquisition of right-of-way for the project development are also part of the process. The Right to Fair Compensation and Transparency in Land Acquisition,</p>

continued on next page

Table 3.1 *continued*

Government Support Type	Comments
	<p>Rehabilitation and Resettlement Act (2013) provides for acquisition of land for public purpose under a humane participation, informed, and transparent process, and to provide just and fair compensation to affected families. The enactment clearly sets out the procedure to be adopted for acquisition of land with respect to development of projects under PPP framework.</p>
VGF	<p>The DEA notification, dated 23 January 2006, provides for VGF equivalent to the lowest bid for capital subsidy but subject to a maximum of 20% of the total project cost. In the case of the sponsoring ministry/state government/statutory entity poses to provide any assistance over and above the VGF, it shall be restricted to a further 20% of the total project cost.</p> <p>Provision of VGF to a PPP in infrastructure requires that the Empowered Institution, the lead financial institution, and the private sector company shall enter into a tripartite agreement.</p> <p>State governments have also established VGF schemes.</p>
Government guarantees	<p>A government guarantee, such as a payment or performance guarantee, and foreign currency conversion guarantee, may be provided based on the result of feasibility study and negotiation between the foreign investor and the authority.</p> <p>Government Guarantee Policy (2010) by the DEA states that the sovereign guarantee is normally extended for achieving the following objectives:</p> <ul style="list-style-type: none"> • To improve viability of project or activities undertaken by government entities with significant social and economic benefit. • To enable SOEs to raise resources at lowest interest charges or on more favorable terms. • To fulfill the requirement in case a sovereign guarantee is a precondition for concessional loans from bilateral/multilateral agencies to subsovereign borrowers.
Availability-/performance-based payment mechanism	<p>The DEA provides for annuity-/availability-based BOT models in sectors and/or projects not amenable for sizable cost-recovery through user charges. In such cases, the government harnesses private sector efficiencies through contracts based on availability/performance payments. Implementing annuity models will require necessary framework conditions such as a payment guarantee mechanism by means of making available multiyear budgetary support, a dedicated fund, and letter of credit. The government may consider setting up a separate window of assistance for encouraging annuity-based PPP projects. A variant of this approach could be to make an up-front payment of a certain percentage of the project cost during construction period on a case-by-case basis.</p>
Tax subsidies	<p>The government has provided several incentives, such as tax exemption and duty-free imports of road building equipment and machinery, to encourage private sector participation. Also, 100% exemption on income tax is available to eligible infrastructure projects for a period of 10 years.</p> <p>PPP projects may also qualify for various tax incentives offered by the government:</p> <ul style="list-style-type: none"> • Exemption from registration tax on acquisition of real estate for BOT projects, • Application of, or exemption from, a lower rate of value-added tax for infrastructure facilities or construction of those facilities supplied to the state or local governments as BTO and BOT projects, • Reduction of, or exemption from, various appropriation charges,

continued on next page

Table 3.1 continued

Government Support Type	Comments
	<ul style="list-style-type: none"> • Recognition of a certain percentage of the investment as a reserve to be treated as an expense for computing corporate taxes, • Allowing the project company to issue infrastructure bonds at a concessional tax rate on interest earned, • Protection against reduction of tariffs or shortening of concession period, and • Protection from a reduction of tariffs or the concession period if the project developer can reduce construction costs below those estimated in the agreement.

BOT = build-operate-transfer, BTO = build-transfer-operate, DEA = Department of Economic Affairs, PDF = project development fund, PPP = public-private partnership, SOE = state-owned enterprise, VGF = viability gap fund.

^a Public Private Partnerships in India. Schemes for Financial Support to Public Private Partnerships in Infrastructure. <https://www.pppinindia.gov.in/schemes-for-financial-support>.

Source: Mott MacDonald.

PPP projects that received government support	1990–2016	1990–2017	In 2017
Viability gap fund	236	245	9
Government guarantees	82	82	-
Availability-/performance-based payment basis	345	353	8

3.1.1.14 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Power purchase agreement	✓	✓
Capacity take-or-pay contract	✓	✓
Fuel supply agreement	✓	✓
Transmission and use of system agreement	✓	✓
Performance-based operation and maintenance contract	✓	✓
Engineering procurement and construction contract	✓	✓

3.1.2 Institutional Capacity for Implementation

3.1.2.1 Institutional Setup

	2016	2017
Is there a specialized government agency (or agencies) established for PPP purposes (e.g., PPP unit)?	✓	✓
What role does this PPP unit have?		
Guidance to and coordination between other government agencies	✓	✓
Supporting (e.g., PPP project preparation, appointment of advisers, running project development fund)	✓	✓
Appraisal of PPP project feasibility studies	✓	✓
Approval of PPP projects	✓	✓
Procurement	✓	✓
Managing, monitoring, and enforcing ongoing PPP contracts	✓	✓

Description and roles of PPP-promoting agencies are given in Table 3.2.

Table 3.2: PPP-Promoting Institutions in India

Institution	Role in Promoting PPP
Department of Economic Affairs, PPP Cell, Infrastructure division	<p>The PPP Cell acts as the secretariat for the PPPAC, Empowered Committee, and Empowered Institution for the projects proposed for financial support through VGF and for central sector projects.</p> <p>The PPP Cell is responsible for policy-level matters concerning PPPs, including project identification, prefeasibility analysis, coordination with government agencies, procurement, model concession agreements, capacity building, and project operation and management.</p> <p>The PPP Cell is also responsible for matters and proposals relating to clearance by the PPPAC, Scheme for Financial Support to PPPs in Infrastructure (VGF Scheme), and IIPDF.</p> <p>The PPP Cell has also developed a tool kit for improving PPPs decision-making processes, which includes various tools to assist in the progressive phases of the PPP project, right from project identification to contract management and monitoring.</p>

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Table 3.2 continued

Institution	Role in Promoting PPP
IIPDF	IIPDF is created within the Department of Economic Affairs, MOF of the Government of India to support the development of PPP projects.
PPPAC	The Cabinet Committee on Economic Affairs, in its meeting on 27 October 2005, approved the procedure for the approval of PPP projects. Pursuant to this decision, the PPPAC was set up. The PPPAC was notified in 2006, and it is responsible for the appraisal of PPP projects in the central sector.
Empowered Institution	The Empowered Institution considers the sanction of projects for VGF of up to ₹1,000 million for each eligible project, subject to the budgetary ceiling indicated by the MOF. The Empowered Institution also considers proposals which require funding support of more than Rs1,000 million and can forward these proposals to the Empowered Committee.
Empowered Committee	The Empowered Committee considers the sanction of projects for VGF from ₹1,000 million up to ₹2,000 million after recommendation from the Empowered Institution, for each eligible project, subject to the budgetary ceiling indicated by the MOF, and also provides instructions relating to eligibility of projects for such support as and when requested by the Empowered Institution.
IIFCL	IIFCL-India Infrastructure Finance was set up for long-term debt financing of PPP projects. It was set up in 2006 and registered as a Non-Banking Financial Company in 2013.

IIFCL = India Infrastructure Finance Company Ltd., IIPDF = India Infrastructure Project Development Fund, MOF = Ministry of Finance, PPP = public-private partnership, PPPAC = Public Private Partnership Appraisal Committee, VGF = viability gap fund.

Source: Mott MacDonald.

Besides the central government institutions mentioned above, there are also various organizations at the state level and/or the sector level which play a role in planning or procuring PPP projects.

3.1.2.2 Project Planning

	2016	2017
Is there a PPP project pipeline developed and available?	✓	✓
Is preliminary selection of PPP projects consistent with public investment prioritization?	✓	✓
Is there screening/identification methodology to identify a list of potential PPP projects from public investment priority projects?	✓	✓

3.1.2.3 Project Preparation

	2016	2017
Number of project appraisal stages	1	1
What feasibility analyses are required for the project to be approved as a PPP?		
Technical feasibility	✓	✓
Financial feasibility	✓	✓
Legal feasibility	✓	✓
Environmental and social sustainability	✓	✓
Value for money assessment	✓	✓
Fiscal affordability assessment	✓	✓
PPP structuring and risk allocation	✓	✓
Initial market testing	✓	✓
Number of approvals to be obtained by public sector to get final go-ahead to commence PPP project procurement	no data	no data
Is the approval from the Ministry of Finance or equivalent required before commencement of procurement?	✓	✓
Is it a normal practice to appoint independent, international, and qualified advisors to assist the government with project preparation?	✓	✓

As per the framework provided by the DEA in 2006, project proposals should satisfy the following criteria to get financial support:

- The proposal should be based on a contract or concession agreement between a government or statutory entity and a private sector company.

The project proposal should be related to one of the sectors (road and bridges, railway, seaport, airport, inland waterways, power, urban transport, water supply, sewerage, solid waste management, other physical infrastructure in an urban area, an infrastructure project under a special economic zone, international convention centers, tourism infrastructure, health, education, and medical colleges) as described in the guidelines.¹³

- The project should provide a service against payment of predetermined tariff or user charges.
- The project should obtain “in principle” approval from the Empowered Institution.

¹³ Public Private Partnerships in India. Schemes for Financial Support to Public Private Partnerships in Infrastructure. <https://www.pppinindia.gov.in/schemes-for-financial-support>.

- Projects based on standardized and/or model documents duly approved by the respective governments will be preferred for consideration, whereas nonstandard documents will be scrutinized by the Empowered Institution before consideration for financial assistance.
- Within 30 days of receipt of the project proposal, the Empowered Institution shall inform the sponsoring government and/or statutory entity whether the project is eligible for financial assistance. If the project is based on nonstandard documents, the approval process may require an additional 60 days.
- For any clarification and instruction regarding the project approval, the Empowered Institution may refer the project to the Empowered Committee for suggestions.
- The financial assistance will be provided if the contract/concession is awarded in favor of a private sector company.
- A private sector company shall be eligible for VGF only if it is selected on the basis of open competitive bidding and will be responsible for financing all the project phases during the concession period.
- The quantum of financial support will be in the form of capital grant at the stage of construction, and the maximum support provided by the DEA under the VGF scheme is up to 20% of the total project cost. The sponsoring authority or state, if required, can provide an additional grant of up to 20% of the project cost.
- VGF for proposals up to (i) ₹1,000 million—may be sanctioned by the Empowered Institution; (ii) up to ₹2,000 million—may be sanctioned by the Empowered Committee; and (iii) amounts exceeding ₹2,000 million—may be sanctioned by the Empowered Committee with the approval of the finance minister.

The Public Private Partnership Approval Committee (PPPAC) guidelines notified by the Government of India for formulation, appraisal, and approval of central sector PPP projects are as follows:

- The sponsoring ministry identifies projects to be taken up under PPP and undertakes feasibility studies and project agreements preparation with the assistance of suitably qualified consultants.
- If needed, a project is discussed in an interministerial consultative committee. Comments are then annexed to the project proposal for consideration of the PPPAC;
- For in-principle clearance of the PPPAC, the administrative ministry submits a project proposal in a predefined format along with prefeasibility/feasibility report.
- The PPPAC circulates these documents to relevant ministries and convenes a meeting with them within 3 weeks to accord in-principle approval to the project.
- For projects based on the standard MCA, PPPAC in-principle approval is not required. In such projects, approval only needs to be taken prior to inviting financial bids.
- Following in-principle clearance, request for qualification (RFQ) may be floated by the administrative ministry for shortlisting of eligible bidders.
- Request for proposal (RFP) and all contract documents are drafted.
- Proposal for final clearance (appraisal note) is sent to the PPPAC in a pre-specified format, which is circulated to all PPPAC members.
- Niti Aayog (Policy Commission), law ministry, and other concerned ministries send their written comments to the PPPAC, which is forwarded to the administrative ministry.

- All the procurement documents and agreements with the PPPAC memo are submitted for PPPAC's consideration. The PPPAC takes a view on the appraisal note and comments of all ministries, along with administrative ministry's response.
- The PPPAC either recommends the project for final approval of the competent authority, with or without changes, or suggests changes to administrative ministry for resubmission for further consideration of the PPPAC.
- Once cleared by the PPPAC, the project is put up to the competent authority for final approval.

3.1.2.4 Risk Allocation

	2016	2017
Preferred risk allocation matrix as reference	✓	✓

The PPP Tool Kit (www.pppinindia.gov.in) identifies the major risks associated with infrastructure projects and indicates the potential risk matrix for all phases of the project (pre-operative, construction, operation, handover, and others) under each major PPP model used for implementing the projects. However, the risk allocation can be negotiated on a case-by-case basis in the project contract.

Apart from the above, the private party is required to take out insurance cover for the project under the concession agreement and for its employees under applicable law.

3.1.2.5 Procurement

	2016	2017
Is competitive bidding the only method for PPP partner selection?	✓	✓
In case of competitive tender:		
Prequalification required?	✓	✓
Minimum time allowed to submit prequalification/expressions of interest (day)	45	45
Minimum time allowed to submit a bid:		
Domestic bidding (day)	30	30
International bidding (day)	45	45
Is negotiation available?	✗	✗
Is there a process allowing unsuccessful bidders to challenge the award/submit a complaint?	✓	✓
If yes, maximum time allowed to submit a complaint starting from announcement of a preferred bidder	10	10

	2016	2017
Maximum time limit from bid closing date until selection of a preferred bidder	45	45
Maximum time limit from selection of a preferred bidder until signing the contract	60	60
Transparency. Which of the following is published?		
Procurement notice	✓	✓
Q&A during bid clarification stage	✓	✓
Evaluation results to bidders	✓	✓
Award notice	✓	✓
Contract	✓	✓
Confidentiality	✓	✓

Details of PPP procurement process are given in Table 3.3.

Table 3.3: PPP Procurement Process in India

Theme	Description
Responsible agency	Authorized government agencies (ministries/department of ministries/ central public-sector enterprise/any company in which more than 50% of the paid-up share capital is held by the central government)
Project announcement	All PPP projects should be announced on the following websites with updates to reflect their current procurement status: www.pppinindia.gov.in/ www.infrastructureindia.gov.in
Prequalification invitation documentation	RFQ is used for prequalification. A model RFQ document is generic in nature with the objective being to identify a credible partner who has the requisite technical and financial capacity for undertaking the project and aims at lending transparency and predictability to the entire process.
Prequalification evaluation criteria	<ul style="list-style-type: none"> • Technical capability • The applicant should have acquired sufficient experience, which can be measured either from the construction work undertaken/commissioned by it, or from revenue of BOT/build-own-lease-transfer/build-own-operate-transfer projects, or from both, during the 5 years preceding the application date. The technical capability of the bidders can be assessed based on the following parameters: <ul style="list-style-type: none"> – project experience on BOT projects in the specified sector – project experience on BOT projects in the core sector – construction experience in the specified sector – construction experience in the core sector – operation and maintenance experience – financial capability – the prequalified applicants should have sufficient financial strength and fund arrangement to undertake the project

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Table 3.3 *continued*

Theme	Description
Prequalification evaluation method	<ul style="list-style-type: none"> As per the Model RFQ document issued by the Planning Commission, submission can be evaluated in two categories: <ul style="list-style-type: none"> technical capability: The credentials of eligible applicants are measured in terms of their “experience score” in the eligible project. The sum of the experience scores for all eligible projects shall be the “aggregate experience score” of a particular applicant. In case of a consortium, the aggregate experience score of each of its members, who have an equity share of at least 26% in such consortium, shall be summed up for arriving at the combined aggregate experience score of the consortium. financial capability: Applicants should have a minimum net worth of 25% of the estimated capital cost of projects for which bids are to be invited.
Shortlist	
Request for proposal documentation	<p>The request should include the following:</p> <ul style="list-style-type: none"> general information about the project, including the contents and scope of the project, and detailed description of the outputs of the project and the services draft project contract copies of any permit and approval technical evaluation of complex projects and the estimated project cost site visit and verification of information instruction to the bidder bidding description of bidding procedure and schedule of bidding process and pre-bid conference summary evaluation method pre-bid conference summary feasibility report, requirements on performance, facility quality standard, service provision standard, tariff mechanism, applicable regulations, contract rewards and penalties, and force majeure events
Methods of interactions with the bidders	<ul style="list-style-type: none"> Question and answer iterations Pre-bid conferences
Evaluation of technical proposals	<ul style="list-style-type: none"> Bidder should get minimum technical requirements or cutoff score (experience score) to proceed to financial evaluation. Bids that fail to meet the cutoff would not be considered for financial evaluation.
Evaluation of financial proposals	<ul style="list-style-type: none"> The evaluation considers the whole-of-life costs or payments in the bid. Net present value calculation to enable comparison between bids with different cash flow timing. Most often the bidder makes the best financial offer (lowest grant, highest premium, highest concession fee) would be selected as the preferred bidder. Value for money
Contract signing	

BOT = build–operate–transfer, PPP = public–private partnership, RFQ = request for qualification.

Source: Public Private Partnerships in India. Standardized Bidding Documents. <https://www.pppinindia.gov.in/standardized-bidding-documents>

3.1.3 PPP Market Maturity

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close	875	879	24
PPP projects currently in preparation	n/a	n/a	11
PPP projects currently in procurement	n/a	n/a	17

Note: It should be noted that the research relied primarily on information reported in public sources which may not be accurate or contain all the required information. Furthermore, generally, limited information is disclosed to public in relation to project failures. Therefore, reported numbers of projects in this table may not be exhaustive.

3.1.4 Financial Facilities

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	18	19	1
PPP projects that received export credit agency/international financing institution financing	49	52	3

	2016	2017
Availability of nonrecourse/limited recourse hard currency loan	✓	✓
Maximum tenor (year)	7 years	7 years
Up-front arrangement fee	150 bps	100–150 bps
Floor rate (reference rate)	LIBOR	LIBOR
Margin rate	350–500 bps	350–400 bps
Political risk cover premium	100–300 bps	100–300 bps
Availability of nonrecourse/limited recourse local currency loan	✓	✓
Maximum tenor (year)	20 years	15–18 years
Up-front arrangement fee	25–35 bps	50–75 bps
Floor rate (reference rate)	600–750 bps (bank base rate)	700–800 bps (bank base rate)
Margin rate	100–400 bps	50–350 bps

	2016	2017
Availability of interest rate swaps	✓	✓
Forward duration of interest rate swap (year)	5 years	5 years
Availability of currency swaps	✓	✓
Forward duration of currency rate swap (year)	3–5 years	3–5 years
Project financing through project bond issuance	✓	✓
Percentage of project bonds out of total debt for project financing	<30%	<30%
Availability of project financing from local public sector banks	✓	✓
Max tenor for loan from local public sector banks (year)	15–18 years	15–18 years
Percentage of foreign debt out of total debt for project financing	<30%	<30%
Typical D:E ratio	70:30	70:30
Timeline to financial close	8–12 months	8–12 months
Minimum DSCR covenant levels	1.2x–1.4x	1.2x

bps = basis points, D = debt, DSCR = debt–service coverage ratio, E = equity, LIBOR = London interbank offered rate.

India has a developed capital market, and the majority of infrastructure PPP projects are financed locally often by state-owned banks. In addition, each Indian state has a separate credit rating assigned by credit agencies.

Table 3.4 shows the most active banks (in the past 24 months) for project finance in India.

Table 3.4: Active Banks for Project Finance in India

Name of Bank	Total Project Financing (\$ million)	Transactions
State Bank of India	627	3
Power Finance Corporation Limited	595	1
Rural Electrification Corporation	595	1
Bank of India	254	4
Asian Development Bank	247	4

Source: Inframation Deals. <http://www.inframationgroup.com/> (information extracted as at 8 March 2018).

As per the guidelines by the Reserve Bank of India (RBI), Indian companies are allowed to access funds from abroad in the following methods:

- **External Commercial Borrowings (ECB):** refers to commercial loans in the form of bank loans, securitized instruments buyers' credit, suppliers' credit availed from nonresident lenders. Infrastructure sector companies (classified as Track 1 companies) can borrow for a minimum average maturity of 3 years (up to \$50 million or its equivalent) and 5 years (beyond \$50 million or its equivalent).
- **Foreign Currency Convertible Bonds (FCCBs):** a bond issued by an Indian company expressed in foreign currency, and the principal and interest in respect of which are payable in foreign currency. In addition to the requirements of Foreign Exchange Management (Transfer or Issue of any Foreign Security) Regulations 2000, FCCBs are also subject to all the regulations which are applicable to ECBs.
- **Preference shares:** this instrument is denominated in rupees and the rupees interest rate will be based on the swap equivalent of London interbank offered rate (LIBOR) plus the spread as permissible for ECBs of corresponding maturity.
- **Foreign Currency Exchangeable Bonds (FCEBs):** a bond expressed in foreign currency, the principal and interest in respect of which are payable in foreign currency, this bond can be issued only under the approval route (see below) and shall have minimum maturity of 5 years. This bond is exchangeable into equity share of another company, to be called the Offered Company, in any manner, either wholly, or partly or on the basis of any equity related warrants attached to debt instruments.
- **Rupee-denominated / Masala Bonds –** These are plain vanilla bonds issued by an eligible Indian entity in foreign markets and the interest payments and principal reimbursements are denominated (expressed) in rupees. Eligible resident entities allowed to issue only plain vanilla rupee-denominated bonds issued overseas in a Financial Action Task Force-compliant financial centers.

ECB can be accessed under two routes:

- Automatic route (i.e., without prior approval of the government or the RBI) or
- Approval route (i.e., requires prior approval of the government).

3.2 Roads

3.2.1 Regulatory Framework

3.2.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

3.2.1.2 Government Contracting Agency

The Ministry of Road Transport and Highway (MORTH) is the central government organization which formulates and administers the PPP program in consultation with other central ministries/departments.

- The NHAI under MORTH is the lead agency to manage PPP contracts. The NHAI has also formed SPV for funding road projects.
- MORTH, NHAI, and Border Roads Organisation manage the National Highway and expressways.
- Public Works Department and other road corporations govern and manage state highways and major district roads.
- Rural roads are developed, maintained, and monitored by the Ministry of Rural Development.
- Project roads for irrigation, power, mines, etc., are governed and managed by state public works departments and project organizations.
- Urban roads for intracity networking are governed by municipal corporations.
- Village roads are being governed by the respective *zila-parishads* (district councils) and state governments.

3.2.1.3 Sector-Specific Regulations

	2016	2017
Does the private partner have a legal right to charge users?	✓	✓

The most commonly applied regulations for the development of national highways are as follows:

- List of operational standards for road design.
- The National Road Safety Policy outlines the policy initiatives to be implemented by the government at all levels to improve the road safety activities in the country.
- The Indian Road Congress was set up by the Government of India in consultation with state governments in December 1934, to provide a national forum for regular pooling of experience and ideas on all matters concerned with planning, design construction, and maintenance of highways.

3.2.1.4 Sector Regulators

All the ministries and agencies mentioned in section 3.2.1.3 are involved in the regulation of the roads sector.

3.2.2 Institutional Capacity for Implementation

3.2.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The government aims to develop a total of 48,793 kilometers (km) of national highways under the following programs:¹⁴

- National Highways Development Project (NHDP);
- Special Accelerated Road Development Programme for the North–East region;
- Development of roads in areas affected by left-wing extremism; and
- National Highways Interconnectivity Improvement Project.

The programs also envisage the following projects potentially being procured through PPP models:

- completion of Golden Quadrilateral and East–West and North–South corridors;
- four-laning of 10,000 km under the NHDP Phase 2;
- two-laning with paved shoulders of 20,000 km of national highways under NHDP Phase 4;
- augmenting highways in the northeast under the Special Accelerated Road Development Programme;
- six-laning of selected stretches of national highways under NHDP Phase 5;
- development of 1,000 km of expressways under NHDP Phase 6; and
- construction of ring roads, flyovers, and bypasses on selected stretches under NHDP Phase 7.

The Union Budget of 2017–2018 allocated \$13.5 billion for the development of roads and highways, of which \$9.49 billion was allotted to NHAI.

The Indian Union Budget for 2018–2019 has allocated \$710 billion to the Central Ministry for Road Transport and Highways, which is 16.39% more than the previous fiscal year.¹⁵

BOT is the preferred mode of delivery with around 70% of the projects being developed under this model.

¹⁴ Government of India. National Highway Authority of India. National Highways Development Project. <http://www.nhai.gov.in/about-nhdp.htm>.

¹⁵ N. Vashist. 2018. Budget 2018: Infrastructure tops FinMin's priority list, receives massive Rs 5.97 lakh crore for FY19, up by 21 percent. *Money Control*. 2 February. <https://www.moneycontrol.com/news/business/economy/budget-2018-infrastructure-tops-finmins-priority-list-receives-massive-rs-5-97-lakh-crore-for-fy19-up-by-21-percent-2490527.html>.

3.2.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	2

3.2.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	2	2	-
Unsolicited bids	242	242	-
Competitive bidding process	320	328	8
PPP projects currently in procurement	n/a	n/a	306

3.2.3 Features of Past PPP Projects

3.2.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	376	384	8
PPP projects that reached financial close (\$ million)	66,472	67,407	935

PPP that reached financial close include major expressway projects such as the Yamuna expressway.

3.2.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	49	52	3
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	13%	14%	38%

3.2.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	196	204	8
Government guarantees:			
Minimum traffic/revenue guarantees	6	6	-
Availability-/performance-based payment basis	59	67	8

The majority of the PPP road projects are supported in terms of land acquisition by the Government of India.

3.2.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	212	212	-
Government-paid contracts	59	67	8

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	no data	no data
Advertising	x	x

3.2.3.5 Tariffs

The implementation agencies, such as NHAI, National Highway and Infrastructure Development Corporation Limited, Border Roads Organisation, and Public Works Department, will carry out the regulatory functions for PPP road projects. For the initial few years, there will be an agreement specifying the upper limit for the user fees that can be charged to users. For the subsequent years, a fee revision is usually stipulated through a defined formula. The government will announce the appropriate upper limit of tariffs from time to time. There are both open and closed toll systems practiced in India.

The levy of user fees is governed by the following:

- the National Highways Fee (Determination of Rates and Collection) Rules, 2008; and
- the National Highways Rules, 1997, permitting collection of fees for the (i) use of sections of national highways/permanent bridges/temporary bridges on national highways and (ii) the use of sections of national highways and permanent bridges (delivered as a public-funded project).

The agreement provides for indexation of user fees to the extent of 40% linked to the wholesale price index (WPI) and exchange rate variations.¹⁶

Examples of toll rates on current toll roads are presented in Table 3.5.

Table 3.5: Examples of Current Toll Rates in India

State	NH-No.	Toll Plaza Name	Section/Stretch	Type of Vehicle	Tariff (₹)		
					Single Journey	Return Journey	Monthly Pass
Gujarat	NE-1	Ahmedabad Vadodra Expressways	Ahmedabad Vadodra Expressway Phase 1 & 2	Car/jeep/van	100	150	3,305
				LCV	160	240	5340
				Bus/truck	335	505	11,190
				Up to three-axle vehicle	365	550	12,205
				Four- to six-axle	525	790	17,550
				HCM/EME	525	790	17,550
				Seven-axle or more	640	960	21,360
Kerala	NH-544	Chullimada Hamlet	Walayar-Vadakkenchery	Car/jeep/van	55	85	1,895
				LCV	90	140	3,060
				Bus/truck	190	290	6,415
				Up to three-axle vehicle	300	455	10,060

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¹⁶ Government of India, Planning Commission. Public Private Partnerships. <http://planningcommission.gov.in/sectors/index.php?sectors=infrastructure>.

Table 3.5 continued

State	NH-No.	Toll Plaza Name	Section/Stretch	Type of Vehicle	Tariff (₹)		
					Single Journey	Return Journey	Monthly Pass
				Four- to six-axle	300	455	10,060
				HCM/EME	365	550	12,250
				Seven-axle or more	365	550	12,250

HCM/EME = heavy construction machinery/earth moving equipment, LCV = light commercial vehicles,
NE = national expressway, NH = national highway

Source: Government of India, National Highway Authority of India. Toll Information System. <http://tis.nhai.gov.in/index?language=en> (accessed 30 January 2018).

3.2.3.6 Risk Allocation

Typical risk allocation arrangements in road PPP contract are presented in Table 3.6.

Table 3.6: Typical Risk Allocation Arrangements in Road PPP Contracts in India

Risk	Private	Public	Shared	Comment
Traffic risk	✓			
Collection risk	✓			
Competition risk				No data
Government payment risk		✓		Foreign sponsor participation
Environmental and social risk	✓			
Land acquisition risk		✓		In the roads sector, the risks associated with land acquisition have the potential to derail a project timetable
Permits	✓			
Geotechnical risk			✓	
Brownfield risk: inventories studies, property boundaries, project scope			✓	
Political risk		✓		
Foreign exchange risk			✓	Foreign sponsor participation

PPP = public-private partnership.

Source: Mott MacDonald.

3.2.4 Local Capabilities

In India, there are numerous local construction companies taking up roles as operators and/or contractors. Some of the large, well-known players that are actively involved in the construction of roads include

- GMR Group,
- IL&FS,
- IRB Infrastructure Developers,
- Ashoka Buildcon,
- Essel Infra projects,
- Uniquet Infra Ventures,
- KNR Construction,
- Transstroy—OJSC Consortium,
- Galfar Engineering Contracting SAOG,
- Sadbhav Engineering,
- Oriental Structural Engineers, and
- Hindustan Construction Company.

3.2.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	-	-	-
PPP projects that received export credit agency/international financing institution support	-	-	-

3.2.6 Challenges

Recently, this sector has faced debt repayment issues and project fund constraints. It is noted that a few projects are undergoing debt restructuring processes with lenders, leading to delay in completion of projects.

Lenders indicate limited liquidity for this sector. Also, private developers are facing liquidity crunch, leading to delay in meeting up-front equity requirements. Procedural delays in granting clearances and land for the projects are also impacting project success. Specific challenges of progressing road PPP projects are presented in Table 3.7.

Table 3.7: Challenges of PPP Progress in the Road Sector in India

Challenges	Currently Implemented Tackling Measures
The risks associated with land acquisition have the potential to severely impact a project schedule.	An infrastructure group has been created to resolve approval/clearance issues and is working actively toward this.
Road development and maintenance projects less than 100 kilometers are relatively small to attract major international bidders and strategic investors.	To cater to the investment need requirements in the road sector, the Department of Industrial Policy and Promotion of the Ministry of Commerce and Industry is actively working to attract foreign investors.
Traffic figures of government tend to be optimistic, leading to the need for independent traffic projections by the private sector causing delay in financial closure.	Approval from NHAI to raise subordinate debt up to 30% of the total project cost of the NHAI through securitization of future cash flow in BOT toll projects.
No uniform tolling policy.	
Disparity in tolling rates between private-funded projects and public-funded projects leading to user resistance.	

BOT = build-operate-transfer, NHAI = National Highway Authority of India, PPP = public-private partnership.

Source: Mott MacDonald.

3.3 Railways

3.3.1 Regulatory Framework

3.3.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

In the railway infrastructure segment, the Indian Railways has in the recent past, allowed 100% FDI in the following categories:

- network expansion,
- gauge conversion,
- high-speed railway projects,
- dedicated freight corridors,
- connectivity to mines and ports,

- electrification and signaling system,
- high-speed tracks and suburban corridors, and
- freight and passenger terminals.

This has opened up opportunities for private participation in the Indian Railways.

100% FDI is also permitted, in metro rail projects but as the system falls under the mass rapid transit system, and not typically part of the Indian Railways, it is not covered substantially under this section.

3.3.1.2 Government Contracting Agency

Concession agreements with foreign collaboration are signed by the Ministry of Railways, under its zonal arms—Zonal Railways. Agreements with domestic concessioners are signed by the respective agency or corporations executing the PPP project. For instance:

- Zonal Railways—Western, Central, Eastern, Southern;
- Rail Vikas Nigam; and
- Container Corporation of India.

3.3.1.3 Sector-Specific Regulations

There are basic regulations that apply to government-financed railway projects on government infrastructure, including

- Railways Act, 1989;
- Railway Protection Force (Amendment) Act, 2003;
- Railways (Amendment) Act, 2005;
- Railways (Amendment) Act, 2008;
- Participative Model for Rail Connectivity and Capacity Augmentation Projects, 2012; and
- Metro Rail Policy, 2017.

The Participative Model for Rail Connectivity and Capacity Augmentation Projects (2012) is aimed at fast-tracking Indian Railways by attracting private investment through PPP. The policy provides five models for last mile connectivity and capacity augmentation projects.

The Metro Rail Policy (2017) boosts private investment by making PPP mandatory for availing VGF from central government, covering 10% of project cost and 50:50 equity sharing model between central government and state government.

3.3.1.4 Sector Regulators

There is no single apex regulating authority designated for controlling functions of the Indian Railways at present. Policies and legislations under different functions are being constructed, amended, and regulated by the Indian Railways under the guidelines set by

different directorates falling under it. For instance, the National Transport Development Policy Committee aims to provide an integrated and sustainable transport system; similarly, the directorate of Research Design and Standards Organisation sets the technical standards of the industry.

However, the Railway Regulatory Authority of India, a national-level independent agency, was proposed by Bibek Debroy Committee in 2015. It was proposed that the agency shall be instrumental in three prime functions—policy making, regulatory function (monitoring or compliance), and operations.

The government has approved the establishment of the Rail Development Authority as an independent rail regulatory authority which shall determine rail tariffs, ensuring fair and equal treatment among private players keen on investment in the Indian Railways. However, the Ministry of Railways shall set final tariffs.

3.3.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Performance-based operation and maintenance contract	×	×
Engineering procurement and construction contract	✓	✓

3.3.2 Institutional Capacity for Implementation

3.3.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

- The Indian Railways intend to develop 60 freight terminals worth ₹50 billion through the PPP model.¹⁷

¹⁷ *The Economic Times*. 2017. Indian Railways Readies Rs 5,000-crore PPP Plan for 60 Freight Terminals. 26 April. <https://economictimes.indiatimes.com/industry/transportation/railways/indian-railways-readies-rs-5000-crore-ppp-plan-for-60-freight-terminals/articleshow/58368745.cms>.

- Thirty-seven stations have been shortlisted by South Central Railways to be redeveloped under PPP.¹⁸
- Two locomotive manufacturing units are under execution under PPP.¹⁹
- The Hyperloop project in Andhra Pradesh is envisaged under the PPP model with an investment of around \$200 million.²⁰

3.3.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	2

3.3.2.3 Procurement

	2016	2017
PPP projects currently in procurement	n/a	1

3.3.3 Features of Past PPP Projects

3.3.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	8	9	1
PPP projects that reached financial close (\$ million)	7,826	7,840	15

¹⁸ *Times of India*. 2018. Redevelopment of Stations Derails on Private Funds, Big Challenge for SCR. 2 February. <https://timesofindia.indiatimes.com/city/hyderabad/redevelopment-of-stations-derails-on-private-funds-big-challenge-for-scr/articleshow/62749693.cms>.

¹⁹ *Times of India*. 2018. Rlys Lines Up Rs 96k-cr Revamp Plan. 29 January. <https://timesofindia.indiatimes.com/business/india-business/rlys-lines-up-rs-96k-cr-revamp-plan/articleshow/62686834.cms>.

²⁰ *The Economic Times*. 2017. Amaravati to Vijayawada in 5 minutes! This is what hyperloop can do for you. 6 September. <https://economictimes.indiatimes.com/industry/transportation/railways/htt-to-build-indias-first-hyperloopconnecting-amaravati-vijayawada/articleshow/60395268.cms>.

3.3.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	2	2	–
PPP projects with foreign sponsor participation (as a share to the total number of rail PPP projects)	25%	22%	0%

3.3.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	4	4	–
Government guarantees	–	–	–
Projects on availability-/performance-based payment basis	–	–	–

3.3.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	5	6	1
Government-paid contracts	–	–	–

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	no data	no data
Advertising	no data	no data

3.3.3.5 Tariffs

Currently, setting of tariffs for railways is the function of the Railway Board. Revising rail fares is a politically sensitive issue. The Rail Development Authority will determine rail tariffs; however, the Ministry of Railways shall set the final tariffs.

3.3.3.6 Risk Allocation

Typical risk allocation arrangements in railway PPP contracts are given in Table 3.8.

Table 3.8: Typical Risk Allocation Arrangements in Railway PPP Contracts in India

Risk	Private	Public	Shared	Comment
Demand risk	✓			
Revenue collection risk	✓			
Tariff risk		✓		
Competition risk	✓			
Government payment risk	✓			
Environmental and social risk			✓	
Land acquisition risk		✓		The Rail Development Authority bears the greatest risk.
Utilities relocation risk	✓			Will be the operator's responsibility but will also get support from the government
Interface with other transport				
Permits			✓	
Geotechnical risk		✓		
Regulatory risk			✓	Rail Development Authority and the private entity would seek change in law enforcement for specific events.
Political risk		✓		
Foreign exchange risk	✓			A fixed fee has to be paid to the government, so that the public sector is not affected by foreign exchange rates.
Early termination risk			✓	Will entail some risk on both parties

PPP = public-private partnership.

Source: Mott MacDonald.

3.3.4 Local Capabilities

The Indian Railways manufactures its own rolling stock, including railroad cars, coaches, and wagons, through the following units and subsidiaries:

- Integral Coach Factory, Chennai;
- Rail Coach Factory, Kapurthala;
- Bharat Earth Movers;
- Burn Standard;
- Braithwaite; and
- Bharat Wagon & Engineering.

Alstom India is a leading supplier of train control systems. The company also has the capability of supplying rolling stock for India's fastest trains—Shatabdi and Rajdhani, which include Alstom designed Linke Hofmann Busch coaches. Other rolling stock suppliers in private sector include

- Titagarh Wagons,
- Texmaco Rail & Engineering,
- BESCO,
- Jindal Rail Infrastructure,
- Pennar Industries, and
- Cimmco.

3.3.5 Challenges

Specific challenges of progressing railway PPP projects are presented in Table 3.9.

Table 3.9: Challenges of PPP Progress in the Railway Sector in India

Challenges	Currently Implemented Tackling Measures
Faulty Model—Indian Railways has not adhered to the model concession agreement offered by the Planning Commission but has been relying on its past experience in PPP projects, which, to a certain extent, has resulted in delays and oversights causing operating challenges.	The CAG of India has advised that the provisions of the agreement need to be complete and clearly defined, with the requisite safeguards, to address any unforeseen event during the concession period.
Return Rate Conflicts—The Ministry of Finance has benchmarked the return on investment at 14% for a railway project to be economically viable. However, two of the six projects audited by the CAG had been approved by the Ministry of Railways despite having a projected IRR of 10.5% and 11.8%. On the contrary, projects with IRR as high as 22% have not been progressed.	The CAG has recommended that adequacy and accuracy of data/information including assumptions need to be exhaustively analyzed assessing the IRR to judge the economic viability of the project.

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Table 3.9 continued

Challenges	Currently Implemented Tackling Measures
Cost and Delays—Milestone payment and target completion dates missing in some contracts. In the case of Haridaspur–Paradip railway link, even though 70% of the land was available by 2006, the audit committee found that only 17% of the line was completed by March 2013, whereas the project cost had nearly doubled.	
Lack of Regulation—As of now, there is no independent PPP regulator.	
Monitoring—Each of the PPP projects were supposed to involve a CPRB that would review monthly progress and financial reports, in order to monitor progress and prescribe corrective measures if necessary. The audit committee (CAG) did not find the requisite reviews made by the CPRB.	

CAG = Comptroller and Auditor General, CPRB = Construction Project Review Board, IRR = internal rate of return, PPP = public–private partnership.

Source: Mott MacDonald.

3.4 Ports

3.4.1 Regulatory Framework

3.4.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

Around 95% of India's trading by volume and 70% by value is done through maritime transport, and the government plays an important role in supporting the ports sector.²¹ It has allowed up to 100% FDI under the automatic route for development of ports and harbors. The government also provides a 10-year tax holiday to enterprises investing to develop, maintain, and operate ports, inland waterways, and inland ports.

²¹ India Brand Equity Foundation. 2018. *Shipping Industry & Ports in India*. <https://www.ibef.org/industry/ports-india-shipping.aspx>.

The Department of Industrial Policy and Promotion in the Ministry of Commerce and Industry reported that the ports sector received FDI worth \$1.637 billion between April 2000 and December 2017.²²

3.4.1.2 Government Contracting Agency

Concession agreements for upgradation and developments in major ports are contracted by the respective major port trusts. Twelve agreements for the development of nonmajor ports have been executed by the respective state corporations established and operating under the jurisdiction of the State Maritime Board, including

- Department of Ports, Andhra Pradesh;
- Gujarat Pipavav Port;
- Kerala State Maritime Development Corporation;
- Public Works, Ports and Inland Water Transport Department, Karnataka;
- Maharashtra Maritime Board; and
- Gujarat Maritime Board.

3.4.1.3 Sector-Specific Regulations

There are 12 major ports and about 200 nonmajor ports in India. All major ports fall under the jurisdiction of the government, and thus are governed by policy directives stipulated under the Major Port Trusts Act, 1963, except Ennore port, which is governed under the Companies Act 1956. Nonmajor ports fall under the jurisdiction of the state governments' maritime boards.

The Ministry of Shipping has filed a bill for replacing the Major Port Trusts Act, 1963 with "The Central Port Authorities Act, 2016" (draft). This step is being taken in view of the need to give more autonomy and flexibility to the major ports, and to bring a common and professional approach to their governance.

The Union Cabinet, on 7 February 2018, approved the amendments to the Major Port Authorities Bill, 2016, pending in the Indian Parliament, allowing port authorities to create specific master plans for development of infrastructure.²³ The bill empowers 12 major ports to perform with greater efficiency on account of full autonomy in decision making.

3.4.1.4 Sector Regulators

The Ministry of Shipping, Tariff Authority of Major Ports (TAMP), and several state maritime boards are the regulating authorities in the sector.

The reform process for major ports was initiated in 1990s as part of the broader strategy for infrastructure development, which called for private sector participation due to the inadequacy of public resources.

²² Government of India, Department of Industrial Policy Promotion. Quarterly Fact Sheet. Fact Sheet on Foreign Direct Investment (FDI) From April 2000 to September 2017.

²³ Government of India, Ministry of Shipping. 2018. Cabinet approves changes in the Major Port Authorities Bill. 7 February. <http://pib.nic.in/newsite/PrintRelease.aspx?relid=176352>.

The TAMP was established in 1997 with the basic objective of regulating the tariffs for major ports. All the major economic functions were directly under the ambit of the TAMP until January 2008 when the model concession agreement (MCA) was approved allowing private participation, thus improving efficiency and to share development and maintenance cost. The government approved the revised MCA for PPP projects in major ports on 3 January 2018.²⁴

The model agreement suggested the following:

- The concessioner to pay a license fee for using land instead of lease for the terminal area.
- Royalty to be paid on “per MT of cargo/TEU handled” basis which would be indexed to the variations in the WPI annually.
- Providing exit route to developers by way of divesting their equity up to 100% after completion of 2 years from the commercial operation date. This is now similar to the MCA provisions in the highways sector.
- In case of additional land for the concessionaire, land rent has been reduced from 200% to 120% of the applicable scale of rates for the proposed additional land.
- No termination compensation is paid to the concessioner on expiry of the agreement.
- Depreciating the entire capital cost of the assets, replacing obsolete assets, over the remaining concession period, even if the new assets would have residual life left at the end of the concession period.
- Tariffs not to be fixed or adjusted by the concessioner but revised as per the decision of the TAMP.

However, in the absence of an independent regulatory body to look into the execution and maintenance of PPP projects, a review board has been proposed to replace the TAMP, with authority to

- arbitrate between Port Authority and PPP concessionaires,
- review stressed PPP projects and suggest measures to revive them, and
- act as an appellate authority looking into grievances regarding the services rendered by the port authority and/or private operators operating within the port premises.

The review board is expected to reduce the cases of litigation between the PPP operators and the port authority.

For nonmajor ports, similar regulatory models have been developed by the state maritime boards. Key features of Gujarat Maritime Board’s model include the following:

- No interference by state authorities in governing tariffs, although the possibility to establish an independent body was kept open.
- The concessioner pays the lease rent on the basis of a separate lease or sublease agreement.
- The concessioner pays a waterfront royalty either in the form of a fixed fee related to the amount of cargo handled through the terminal, revised by 20% every 3 years

²⁴ Government of India, Ministry of Shipping. 2018. *Government Revises Model Concession Agreement for PPP in Major Ports*. 8 March. <http://pib.nic.in/newsite/PrintRelease.aspx?relid=177181>.

(straight line option) or a fee notified by the Government of Gujarat along with the Schedule of Port Charges, revised by 20% every 3 years.

- Compensation to be paid to the concessioner against the movable assets at the terminal, on expiry of the concession period.

Details of port sector regulatory agencies are presented in Table 3.10.

Table 3.10: Port Sector Regulatory Agencies in India

Agency	Function
Ministry of Shipping	Apex body for formulation and administration of the rules, regulation, and laws related to shipping
Tariff Authority of Major Ports	Regularizing tariffs for major ports
State maritime boards	Formulation and administration of the rules, regulation, and laws related to shipping

Source: Mott MacDonald.

The government plans to introduce a new framework for renegotiating PPP contracts, based on sector-specific issues, to provide higher flexibility to the parties involved.

The power of the Ministry of Shipping has been enhanced to accord investment approval for PPP projects in the sector.

3.4.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Performance-based operation and maintenance contract	✓	✓
Engineering procurement and construction contract	✓	✓

3.4.2 Institutional Capacity for Implementation

3.4.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

A total of 162 ports are in the pipeline under the Sagarmala program, with an overall cost of ₹6,754 billion. Of these 162 projects, 67 are under focus with an overall cost of ₹2,703 billion for 2018–2019.²⁵

3.4.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	46

3.4.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	4	4	-
Unsolicited bids	31	31	-
Competitive bidding process	23	23	-
PPP projects currently in procurement	n/a	n/a	86

3.4.3 Features of Past PPP Projects

3.4.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	41	41	-
PPP projects that reached financial close (\$ million)	8,883	8,883	-

²⁵ Government of India, Ministry of Shipping. *Projects Under Sagarmala*. <http://sagarmala.gov.in/projects/projects-under-sagarmala>. June 2018.

3.4.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	18	18	-
PPP projects with foreign sponsor participation (as a share to the total number of port PPP projects)	44%	44%	-

3.4.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	1	1	1
Government guarantees	-	-	-
Projects on availability-/performance-based payment basis	-	-	-

3.4.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	20	20	-
Government-paid contracts	-	-	-

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	✓	✓
Wharf charge	✓	✓
Navigation charge	✓	✓
Pilotage charge	✓	✓
Channel access charge	✓	✓

3.4.3.5 Concession Fees

	2016	2017
What are the typical mechanisms for fee paid to the government?		
Lump sum	x	x
Royalties	✓	✓
Revenue share	✓	✓
Profit share	x	x
Annual lease	✓	✓

3.4.3.6 Tariffs

	2016	2017
Does private sector have the freedom to set the tariff?	x	x

All major ports fall under the direct control of the TAMPs. The government is planning to deploy newer guidelines that will slowly shift the role of the TAMP from that of being a rate setter to a monitoring and grievances addressing authority. Individual port trust will have the flexibility to determine rates in line with prevailing market conditions without loss of traffic. This rate-setting freedom is expected to play a key role in the success of state governments' ports.

3.4.3.7 Labor

	2016	2017
How is the issue of excess and efficiency of labor force typically being resolved?	no data	no data
Private operator is given the freedom to hire and fire and to set its own terms and conditions of employment.	no data	no data
The pre-PPP workforce is transferred to the private operator. The private operator is allowed to make gradual changes to the terms and conditions of employment, provided these are no worse than before and/or are acceptable to the unions or workers' representatives.	no data	no data
The port authority or the government undertakes a major labor force restructuring in advance of the PPP, and the workforce is transferred to the private operator.	no data	no data

3.4.3.8 Risk Allocation

Typical risk allocation arrangements in port PPP contracts are presented in Table 3.11.

Table 3.11: Typical Risk Allocation Arrangements in Port PPP Contracts in India

Risk	Private	Public	Shared	Comment
Demand risk			✓	Depends on the overall portfolio of products being handled by the port so affected by types of industry in the vicinity
Competition risk (exclusivity)	✓			Depends upon the portfolio of products handled by the port, which in turn depends upon the designed handling capacity of the port
Tariff	✓			
Environmental and social risk			✓	
Land acquisition risk		✓		Low risk if the project is sanctioned environmental clearance. Coastal land either falls under the ambit of the maritime board or the port authority.
Permits		✓		Obtaining clearances is normally time-consuming, posing risks of delay and cost escalation.
Geotechnical risk		✓		
Foreign exchange risk	✓			Public sector to get a fixed portion of the revenue, so only the revenue of the private party is affected.
Political risk		✓		

PPP = public-private partnership.

Source: Mott MacDonald.

3.4.4 Local Capabilities

Mundra Port is the largest private port in Gujarat. It is owned by Adani Enterprises under the group company Adani Ports and Special Economic Zone. In fiscal year 2013–2014, it became the biggest and the first to handle 100 million tons of cargo. Other major players include the following:

- Larsen & Toubro has designed, established, and commissioned the Katupally International Container Terminal.
- Reliance Industries operates Sikka port in Gujarat.

- Essar too operates a number of ports in India, including Vadinar, Salaya, and Hazira in the west, with a total cargo load of 140 million metric tons per annum.
- Marg foundation India was a part of the development of the Karaikal Port, near Puducherry.
- DVS Raju has a stake in Gangavaram port, NATCO Group in Krishnapatnam port, AMP Terminals in Pipavav port, and Balaji Infra in Dighi port.
- JSW Steel operates Jaigarh port near Mumbai.

3.4.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	1	1	–
PPP projects that received export credit agency/international financing institution financing	1	1	–

3.4.6 Challenges

Specific challenges of progressing PPP port projects are given in Table 3.12.

Table 3.12: Challenges of PPP Progress in the Port Sector in India

Challenges	Currently Implemented Tackling Measures
Inadequate road and rail networks interconnecting inland container terminals and seaports	A Special Purpose Vehicle has been formed as India Port Railway Corporation Limited to establish last mile connectivity with major ports
Inadequate cargo handling equipment, navigational aids, information technology systems, insufficient dredging capacity, and lack of technical expertise lowers the efficiency of Indian ports.	
Tariff regulatory risk arising from the TAMP policy.	The Ministry of Shipping has filed a bill for replacing the “Major Port Trust Act, 1963” with “The Central Port Authorities Act, 2016” (draft). This step is being taken in view of the need to give more autonomy and flexibility to the major ports, and to bring a common and professional approach in their governance.

PPP = public–private partnership, TAMP = Tariff Authority of Major Ports.

Source: Mott MacDonald.

3.5 Airports

3.5.1 Regulatory Framework

3.5.1.1 Foreign Investor Participation Restrictions

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	100%	100%

The FDI policy permits up to 100% FDI in both greenfield projects and brownfield projects under the automatic route. The FDI limit in scheduled air transport service/domestic scheduled passenger airline and regional air transport service has been raised to 100%, with FDI up to 49% permitted under automatic route and FDI beyond 49% through government approval. However, foreign airlines are allowed to invest in the capital of Indian companies operating scheduled and non-scheduled air transport services up to the limit of 49% of their paid-up capital and subject to the laid down conditions in the existing policy and approvals from the Directorate General of Civil Aviation.²⁶

3.5.1.2 Government Contracting Agency

The Ministry of Civil Aviation (MOCA) is responsible for the formulation of national policies and programs for the development and regulation of the civil aviation sector in India. The ministry exercises administrative control over attached and autonomous organizations such as Airports Authority of India (AAI), Directorate General of Civil Aviation, and Bureau of Civil Aviation Security. The key legislation and policies governing this sector include AAI Act, 1994; Policy on Airport Infrastructure; Domestic Air Transport Policy; Aircraft Act, 1934; and Airport Rules and the Open Sky Policy.

3.5.1.3 Sector-Specific Regulations

The following acts specifically pertain to the airport sector:

- AAI Act, 1994, was enacted to provide for the constitution of the AAI for the better administration and cohesive management of airports and civil enclaves by merging the National Airports Authority and the International Airports Authority of India entrusted with the responsibility of creating, upgrading, maintaining, and managing civil aviation infrastructure both on the ground and airspace in India. It was amended by the Indian Parliament in 2003 to facilitate participation of the private sector in the development of greenfield airports.

²⁶ Make In India-Aviation. <http://www.makeinindia.com/sector/aviation>.

- The National Civil Aviation Policy, 2016,²⁷ issued by the MOCA, focuses on strengthening nationwide air connectivity and rationalizing fares to be affordable to masses. Accordingly, the policy encourages the development of airports in PPP mode with AAI and the state governments contributing as public enterprises. The MOCA launched "Ude Deshka Aam Naagrik" (UDAN) Regional Connectivity Scheme in October 2016, which is a key component of the policy to provide air connectivity to currently underserved and unserved airports, and make air travel accessible to citizens and to stimulate regional connectivity through a market-based mechanism.²⁸
- The Directorate General of Civil Aviation (DGCA) is the regulatory body primarily dealing with safety issues. It is responsible for regulation of air transport services to/from/within India and for enforcement of civil air regulations, air safety, and airworthiness standards. The DGCA also coordinates all regulatory functions with the International Civil Aviation Organization.²⁹
- As per the guidelines prescribed by the International Civil Aviation Organization, the MOCA publishes regulations to airport and airline operators to ensure safety and security of operations. AAI is responsible for implementing the guidelines and monitoring compliance.
- The Bureau of Civil Aviation Security is responsible for laying down standards and measures with respect to security of civil flights at international and domestic airports.³⁰
- Regulations related to customs and immigration are administered, respectively, by the Ministry of Finance and the Ministry of Home Affairs.

3.5.1.4 Sector Regulators

Details of airport sector regulatory agencies are given in Table 3.13.

Table 3.13: Airport Sector Regulatory Agencies in India

Agency	Function
Airports Authority of India (AAI)	<ul style="list-style-type: none"> • AAI is responsible for developing, financing, operating, and maintaining all public sector airports. • AAI acts as an operator and regulator of airports, and is the only body (except the Indian Air Force) empowered to provide the air traffic services over the Indian airspace and adjoining oceanic areas in accordance with the International Civil Aviation Organization standards. • Communication, navigation and surveillance/air traffic management, and other allied infrastructure required for a greenfield airport will be mandatorily provided by the AAI.

continued on next page

²⁷ Government of India, Ministry of Civil Aviation. 2016. *National Civil Aviation Policy, 2016: Salient Features*. 15 June. <http://pib.nic.in/newsite/PrintRelease.aspx?relid=146238>.

²⁸ Government of India, Ministry of Civil Aviation. 2017. *PM Shri Narendra Modi will Flag-off First UDAN Flight under RCS Tomorrow*. 26 April. <http://pib.nic.in/newsite/PrintRelease.aspx?relid=161310>.

²⁹ Government of India, Ministry of Civil Aviation. 2017. *Organization Setup*. <http://www.civilaviation.gov.in/aboutus/orgsetup>.

³⁰ Government of India, Ministry of Civil Aviation. 2017. *Organization Setup*. <http://www.civilaviation.gov.in/aboutus/orgsetup>.

Table 3.13 continued

Agency	Function
Directorate General of Civil Aviation (DGCA) and Bureau of Civil Aviation Security (BCAS)	<ul style="list-style-type: none"> The aerodrome licences is granted by the DGCA. The DGCA and BCAS are responsible for safety and security aspects related to flight operations.
Airport Economic Regulatory Authority (AERA)	<ul style="list-style-type: none"> AERA regulates the tariff and user charges for the services rendered by the airports. It also monitors performance standards of nationwide airports.
Ministry of Civil Aviation (MOCA)	<ul style="list-style-type: none"> Site clearance for all greenfield airports is granted by MOCA, based on the reports submitted by AAI and DGCA.
Ministry of Defence (MOD)	<ul style="list-style-type: none"> The MOD approves the green field project, if the proposed project comes within the restricted air space.
Ministry of Finance (MOF) and Ministry of Home Affairs (MHA)	<ul style="list-style-type: none"> Clearance for customs-related service will be issued by the MOF. MHA issues the license with regard to the location of the airport, acquisition and installation of security equipment, and verification of credentials of the developers. Clearances for immigration-related services will be issued by the MHA.

Source: Mott MacDonald.

3.5.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Performance-based operation and maintenance contract	✓	✓
Engineering procurement and construction contract	✓	✓

3.5.2 Institutional Capacity for Implementation

3.5.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

- AAI targets operating 250 airports in the country by 2020.³¹
- Expenditure of \$3 billion has been budgeted for non-metro (Tier II & Tier III) airports between 2016 and 2020, focusing on the modernization and upgradation of many of the existing airports (footnote 72).³²
- The development of second airports at Delhi, Mumbai, Chennai, and Kolkata are likely to be done through PPP.

3.5.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	1

3.5.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	6	6	-
Competitive bidding process	5	6	1
PPP projects currently in procurement	n/a	n/a	1

3.5.3 Features of Past PPP Projects

3.5.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	7	8	1
PPP projects that reached financial close (\$ million)	5,111	5,319	208

³¹ Government of India. *Make in India Initiative*. <http://www.makeinindia.com/sector/aviation>.

³² Government of India. *Make in India Initiative*. <http://www.makeinindia.com/sector/aviation>.

3.5.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	4	–	4
PPP projects with foreign sponsor participation (as a share to the total number of airport PPP projects)	57%	0%	50%

3.5.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects received government support:			
Land acquisition support	no data	no data	no data
Viability gap fund	1	1	no data
Government guarantees	–	–	no data
Projects on availability-/performance-based payment basis	–	–	no data

3.5.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	3	3	–
Government-paid contracts	–	–	–

	2016	2017
What aeronautical revenue streams are allowed?		
Landing fees	✓	✓
Aircraft parking fees	✓	✓
Boarding bridge fees	✓	✓
Terminal service fees	✓	✓

	2016	2017
What non-aeronautical revenue streams are allowed?		
Commercial	✓	✓
Ancillary	✓	✓

3.5.3.5 Tariffs

The user charges levied by the airports for aeronautical services are determined as per the provisions under the Government Support Agreement. The Joint Venture Committee/special purpose vehicle (SPV) is free to fix the charges for non-aeronautical services, subject to the applicable law and provisions in the development and maintenance contracts.

3.5.3.6 Risk Allocation

Typical risk allocation arrangements in airport PPP projects are given in Table 3.14.

Table 3.14: Typical Risk Allocation Arrangements in Airport PPP Contracts in India

Risk	Private	Public	Shared	Comment
Traffic risk	✓			
Competition risk (exclusivity)	✓			Competition risk is medium because of the oligopolistic nature of the industry.
Environmental and social risk		✓		The environmental procedures are complex and time-consuming.
Land acquisition risk		✓		There are hurdles in land acquisition, primarily resistance from local communities. This is mainly observed because of considerable difference between the registered value of land at which compensation is offered and the actual market value, which results in disputes and litigation.
Permits		✓		Multiple approval agencies are involved for statutory approvals.
Handover risk			✓	
Political risk		✓		
Foreign exchange risk			✓	Foreign sponsor participation

PPP = public-private partnership.

Source: Mott MacDonald.

3.5.4 Local Capabilities

The private sector played an unprecedented role during the 11th Five-Year Plan (2005–2012) by acting as a key contributor for the development of airports in PPP mode. The major contributors are

- GMR—Hyderabad International Airport, modernization of Delhi International Airport;
- GVK—Modernization of Mumbai International Airport; and
- L&T, Unique, and Siemens—Bangalore International Airport.

3.5.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	-	-	-
PPP projects that received export credit agency/international financing institution support	-	-	-

3.5.6 Challenges

Specific challenges of progressing airport PPP projects are presented in Table 3.15.

Table 3.15: Challenges of PPP Progress in the Airport Sector in India

Challenges	Currently Implemented Tackling Measures
Project preparation: Lack of information for bidders.	
Land acquisition: Land acquisition is a major roadblock in the development of airport projects under PPP mode.	
Obtaining statutory approvals and clearances: This is frequently a source of project delay.	The Government of India has implemented the Single window clearance, which should ease the process of obtaining approvals with a single source of information/contact.
Financial constraints: The infrastructure projects are capital intensive in nature and have long gestation periods. Most of the private players are dependent on financing institutions and equity markets to raise funds for their part under the PPP projects.	The Hybrid Annuity Method implemented by the Government of India could overcome the financial constraints.

PPP = public–private partnership.

Source: Mott MacDonald.

3.6 Energy

3.6.1 Regulatory Framework

3.6.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Power generation	100%	100%
Power transmission	100%	100%
Power distribution	100%	100%
Oil and gas	100%	100%

A total of 49% FDI is allowed in the following:

- power exchanges, automatic routes under the Central Electricity Regulatory Commission; and
- petroleum and natural gas refining sector (for public sector undertakings without involving any disinvestment or dilution of domestic equity).

3.6.1.2 Government Contracting Agency

In India, there are different authorities for the power sector and the oil and gas sector.

Power

The Ministry of Power is an apex organization under the central government, which formulates and administers the program in consultation with other central ministries/departments. The Ministry of Power is a holding body for

- generation (tariff regulation),
- scheduling and dispatching,
- transmission, and
- distribution.

Oil and Gas

The Ministry of Petroleum and Natural Gas is an apex organization under the central government. Its major functions include

- exploration, production, refining, distribution and marketing, and import and export of oil and natural gas; and
- conservation of petroleum products and liquefied natural gas.

3.6.1.3 Sector-Specific Regulations

Power

The power sector in India is mainly governed by the Electricity Act, 2003 (amended in 2007), which seeks to create a liberal framework of development in this sector. Some of its salient features include the following:

- de-licensing of generation and free permission for captive generation,
- open access in transmission to be provided to distribution licensees, generating companies,
- open access in distribution to be allowed by state electricity regulatory commissions in phases,
- trading is recognized as a distinct activity and the regulatory commissions being authorized to safeguard it by fixing ceiling on trading margins,
- the follow-on policy includes National Tariff Policy 2006, which assures electricity at reasonable rates and competitive price to the customers. This policy was amended as Revised Tariff Policy, 2016. The key features of this policy are ensuring financial viability of the sector, attracting investments, and minimizing regulatory risks, and
- to reduce dependency on imported coal, a PPP policy framework will be devised with Coal India to increase coal production.

Renewable Energy

The Ministry of New and Renewable Energy, the governing body for new and renewable energy in India, facilitates research, design, development, manufacture, and deployment of new and renewable energy systems/devices, and focuses on solar, wind, small hydro projects, and biofuel projects. The roles of the ministry include

- issuing guidelines for green large-area developments, for grid interactive solar and wind energy,
- providing fiscal concessions such as 80% accelerated depreciation, concessional customs duty for specific critical components, excise duty exemption, and income tax exemption on profits from power generation,
- through the policy for grid-connected solar rooftop projects, the Joint Electricity Regulatory Commission and the state electricity regulatory commissions of 29 states and union territories have notified regulations and tariff orders for grid-connected solar rooftop projects,
- providing central financial assistance for small and micro hydropower projects to the public and private sectors,

- providing VGF support of up to \$153,846.2/megawatts (MW) based on reverse e-auction, under the 5,000 MW VGF scheme, which is to be implemented by Solar Energy Corporation of India (SECI).³³ SECI aims to develop renewable energy technologies and ensure inclusive renewable energy power development throughout India,
- formulating offshore wind energy policy focusing on exploring and promoting deployment of offshore wind farms in the exclusive economic zones and to promote investment in wind energy infrastructure,
- formulating policy for repowering of the wind power projects, and
- providing generation-based incentives of \$0.007/unit kilowatt-hour (kWh) subject to a maximum of \$153,846.2/MW for wind power projects (not availing the benefits of accelerated depreciation).³⁴

Oil and Gas

- The oil and gas sector is governed by the Petroleum and Natural Gas Regulatory Board Act, 2006, which regulates the refining, storage, transportation, distribution, and marketing of petroleum products excluding production of crude oil and natural gas.
- Open acreage policy will enable private participants to come up with proposals for exploration and development of fields not identified by the government.
- Other policies include New Hydrocarbon Exploration and Licensing Policy, Small Fields Policy (March 2016) for monetization of 67 discoveries, through international competitive bidding. New gas pricing formula linked to global market was made effective from November 2014.
- Petroleum and Minerals Pipeline Act, 1962 governs laying of pipelines for transport of petroleum and minerals. Petroleum Act, 1934 governs import, transport, storage production, refining, and blending of petroleum, and deals substantially with midstream activities of petroleum. Oil Fields Act, 1948 is the basic statute for licensing and leasing of petroleum and gas blocks by the Government of India, empowering the government with broad authority to make rules providing for the basic regulation of oil fields and for the development of mineral oil resources. Along with Petroleum Rules, 2002, the Oilfields (Regulation and Development) Act, 1948 governs the grant of production exploration licenses and mining leases.
- The Policy on Shale Gas and Oil, 2013 allows companies to apply for shale gas and oil rights in their petroleum exploration licenses and petroleum mining leases.

State Initiatives for Renewable Energy include the following:

- State electricity regulatory commissions in Andhra Pradesh, Haryana, Punjab, Madhya Pradesh, Maharashtra, Rajasthan, Tamil Nadu, Gujarat, Kerala, Punjab, Odisha, and West Bengal have announced preferential tariffs for purchase of power from wind power projects.
- New Solar Policy (2016) for Delhi, Himachal Pradesh, and Haryana.
- New Solar Policy (2015) for Telangana, Jharkhand, Gujarat, and Andhra Pradesh.

³³ Make in India. Renewable Energy. <http://www.makeinindia.com/sector/renewable-energy>.

³⁴ Make in India. Renewable Energy. <http://www.makeinindia.com/sector/renewable-energy>.

3.6.1.4 Sector Regulators

Details of energy sector regulatory authorities are presented in Table 3.16.

Table 3.16: Energy Sector Regulatory Agencies in India

Agency	Function
Central Electricity Regulatory Commission (CERC)	Responsible for improving the power market and promoting investment in the power sector. CERC operates at the national level, the state electricity regulatory commissions operate at the state level, and the Joint Electricity Regulatory Commission operates in all union territories, and the states of Manipur and Mizoram.
Petroleum and Natural Gas Regulatory Board	Assists the Ministry of Petroleum and Natural Gas in storage, transportation, distribution, and marketing of petroleum, petroleum products, and natural gas, excluding production of crude oil and natural gas.
Directorate General of Hydrocarbons (DGH)	Under the Ministry of Petroleum and Natural Gas, DGH promotes sound management of the oil and natural gas resources with a balanced regard for environment, safety, and technological and economic aspects of the petroleum industry. Also, regulates the exploration and optimal exploitation of hydrocarbons.
Ministry of New and Renewable Energy	Assists the Ministry of Power through research, design, development, manufacture, and deployment of new and renewable energy systems/devices for transportation, and portable and stationary applications in rural, urban, industrial, and commercial sectors.

Source: Mott MacDonald.

3.6.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
Power		
PPP/concession agreement	✓	✓
Power purchase agreement (PPA)	✓	✓
Capacity take-or-pay contract	✓	✓
Fuel supply agreement	✓	✓
Transmission and use of system agreement	✓	✓
Performance-based operation and maintenance (O&M) contract	✗	✗
Engineering procurement and construction contract	✓	✓

What standardized contracts are available and used in the market?	2016	2017
Oil and gas sector		
PPP/concession agreement	x	x
PPA	x	x
Capacity take-or-pay contract	x	x
Fuel supply agreement	x	x
Transmission and use of system agreement	x	x
Performance-based O&M contract	x	x
EPC contract	x	x

3.6.2 Institutional Capacity for Implementation

3.6.2.1 Project Planning

	2016	2017
Power		
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓
Oil and gas		
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The Make in India campaign, launched in September 2014, has proposed a massive infrastructure developmental program for the energy sector, including:

- setting up of ultra mega power projects of 4,000 MW capacity each and identified Power Finance Corporation as the nodal agency for the ultra mega power projects with likely investment of \$27.92 billion
- an investment of \$114.87 billion is proposed for thermal power projects and \$2.707 billion in hydro projects. Investment in transmission line sector is proposed at \$8.198 billion and includes Green Corridor-I (\$1.307 billion), Green Corridor-II (\$0.565 billion), tariff-based competitive bidding (\$1.616 billion), and \$4.710 billion scheme, which is to be awarded by Powergrid.
- India has set an ambitious plan to add 175 gigawatts of renewable energy generation capacity by 2022.

- The Government of India has proposed many steps to attract investments such as expansion plans from 23 refineries for tapping foreign investment in export-oriented infrastructure, including product pipelines and export terminals.

The government has also instituted the renewable energy bidding program, which has been very successful. SECI and National Thermal Power Corporation have been tasked by the government to write PPAs for developers, which took away the distribution company risk and resulted in a decrease in tariffs due to lower perceived risk. A number of solar parks have been developed through this program.

3.6.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

3.6.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	167	167	-
Unsolicited bids	190	196	6
Competitive bidding process	91	97	6
License scheme	25	28	3
PPP projects currently in procurement	n/a	n/a	2

3.6.3 Features of Past PPP Projects

3.6.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)			
<i>Renewable energy generation:</i>			
Solar	80	88	8
Wind	92	96	4

	1990– 2016	1990– 2017	In 2017
Hydro	46	46	-
Geothermal	-	-	-
Waste/biomass	15	16	1
Thermal energy generation:			
Coal	87	87	-
Diesel	16	16	-
Other (natural gas)	22	22	-
Transmission & Distribution	34	35	1
Total Energy Generation and Transmission and Distribution	392	406	14
PPP projects that reached financial close (\$ million)			
Renewable energy generation:			
Solar	4,868	5,407	539
Wind	7,145	7,410	265
Hydro	9,493	9,493	-
Geothermal	-	-	-
Waste/biomass	131	137	6
Thermal energy generation:			
Coal	95,601	95,601	-
Diesel	3,213	3,213	-
Others (natural gas)	6,989	6,989	-
Transmission & Distribution	6,635	6,781	147
Total Energy Generation and Transmission and Distribution	134,074	135,030	956

3.6.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)			
Renewables	42	44	2
Thermal	26	26	-
PPP projects with foreign sponsor participation (as a share to the total number of energy PPP projects)			
Renewables	18%	18%	15%
Thermal	16%	16%	0%

3.6.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	26	27	1
Government guarantees			
Capital subsidy/payment guarantees	74	74	-
Projects on availability-/performance-based payment basis	279	279	-

3.6.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	43	-	43
Government-paid contracts	279	12	291

3.6.3.5 Tariffs

The implementing and regulating agency, Central Regulatory Electricity Commission, will carry out the regulatory functions in the case of a PPP power project. Tariff Policy, 2006, sets directives for various aspects of power project development, such as requirements for competitive bidding, rates of return for power projects, financing limits in relation to debt-equity ratios, and depreciation rates for power assets.

For renewable energy, the policy requires that each state electricity regulator specify a time-bound renewable purchase obligation with distribution companies and establish preferential tariffs for the purchase of electricity from nonconventional technologies. In January 2016, the central government approved amendments to the tariff policy that increased state-wide renewable purchase obligation targets to 17% by 2022, including a minimum 8% provision for solar energy (from the previous target of 3%).

Petroleum Planning and Analysis Cell, along with the Ministry of Petroleum and Natural Gas, regulates the tariff for the petroleum and petroleum products including hydrocarbon.

Is there a system of feed-in tariffs (FITs)?		✓
Typical FIT levels	Type	US cent/kWh*
Wind Zone-1	Wind	Project Specific
Wind Zone-2		
Wind Zone-3		
Wind Zone-4		
Wind Zone-5		
Below 5 MW (for Himachal Pradesh, Uttarakhand, and northeastern states)	Hydro	8.9
5 MW–25 MW (for Himachal Pradesh, Uttarakhand, and northeastern states)		6.7
Below 5 MW (for other states)		9.3
5 MW–25 MW (for other states)		7.8
Biomass (other than rice straw and traveling grate boiler)		
Biomass power projects with water cooled condenser	Biomass	12.03
Biomass power projects with air cooled condenser		12.18
Biomass (with rice straw and traveling grate boiler)		
Biomass power projects with water cooled condenser		12.18
Biomass power projects with air cooled condenser		12.60

Biomass (with rice straw and AFBC boiler)		
Biomass power projects with water cooled condenser	Biomass	11.89
Biomass power projects with air cooled condenser		12.28
Biomass (other than rice straw and AFBC boiler)		
Biomass power projects with water cooled condenser		12.03
Biomass power projects with air cooled condenser		12.45
Biomass Gasifier Power Project		11.1
Bagasse-based cogeneration		9.87
Biogas	Biogas	Project Specific
Solar photovoltaic	Solar	Project Specific
Solar thermal		Project Specific

AFBC = atmospheric fluidized bed combustion, kWh = kilowatt-hour, MW = megawatt.

Note: Levelled total tariff (FY 2016); #Considered for one state.

Source: Central Electricity Regulatory Commission. *Determination of Level of Generic Tariff for FY 2017-18 under Regulation 8 of the Central Electricity Regulatory Commission Regulation 2012.*

3.6.3.6 Risk Allocation

Typical risk allocation arrangements in energy PPP contracts are presented in Table 3.17.

Table 3.17: Typical Risk Allocation Arrangements in Energy PPP Contracts in India

Risk	Private	Public	Shared	Comment
Demand risk		✓		
Revenue collection risk		✓		
Tariff risk	✓			
Government payment risk		✓		In case of foreign sponsor
Environmental and social risk	✓			
Land acquisition risk			✓	
Permits	✓			
Handover risk	✓			
Political risk		✓		

continued on next page

Table 3.17 *continued*

Risk	Private	Public	Shared	Comment
Regulatory risk		✓		
Interconnection risk			✓	
Brownfield risk: asset condition			no data	
Grid performance risk	✓			
Hydrology risk	✓			
Exploration and drilling risk			no data	

PPP = public-private partnership.

Source: Mott MacDonald.

3.6.4 Local Capabilities

There are many local construction companies for thermal power, renewable energy, and oil and gas. The most prominent/renowned among these are Tata Power, Essar Power, Jindal Power, Adani Power Limited, Infrastructure Leasing and Financial Services Energy Development Company, Monnet Power, Jaiprakash Power Ventures, Welspun, Bharat Heavy Electricals Limited, National Thermal Power Corporation, Lanco Solar Energy, Greenko, and Azure Power Global Limited. All of these companies are actively involved in the construction of energy projects.

Implementation agencies, such as SECI, and various state directorates of energy, Central Electricity Regulatory Commission, Power Grid Corporation of India, Gujarat Maritime Board, Power Finance Corporation, Rural Electrification Corporation, and Indian Renewable Energy Development Agency, have dominated operation, maintenance, and tariff collection.

3.6.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	17	18	1
PPP projects that received export credit agency/international financing institution support	46	49	3

3.6.6 Challenges

Specific challenges of progressing energy PPP projects are given in Table 3.18.

Table 3.18: Challenges of PPP Progress in the Energy Sector in India

Challenges	Currently Implemented Tackling Measures
Environmental clearances	An infrastructure group chaired by the minister has been set up for addressing interministerial clearances and other related issues.
Dispute resolution facility	Kelkar Committee report 2015, on revisiting and revitalizing PPP model, proposes to set up a committee under the Department of Economic Affairs for speedy dispute resolution.
Exploration policy	New Hydrocarbon Exploration and Licensing Policy was introduced
Fuel supply	As per Union Budget 2016–2017, a PPP policy framework will be devised with Coal India.
Private sector liquidity limits	

Source: Mott MacDonald.

3.7 Municipal Solid Waste

3.7.1 Regulatory Framework

3.7.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

3.7.1.2 Government Contracting Agency

The Ministry of Urban Development is an apex organization under the central government, which formulates and administers the program in consultation with other central/state ministries/departments (such as the Ministry of Power, the Ministry of New and Renewable Energy, the Ministry of Agriculture, and the Ministry of Chemicals and Fertilizers) and urban local bodies (ULBs). The Ministry of Urban Development is a holding body for

- formulations, coordination, and monitoring of policies for water supply, sanitation, and municipal solid waste (MSW) management.

3.7.1.3 Sector-Specific Regulations

The sector is mainly governed by the Municipal Solid Waste (Management & Handling) Rules, 2000, which were revised and renamed Solid Waste Management Rules in 2016.

Other applicable laws in this sector include:

- Hazardous and Other Wastes (Management and Transboundary Movement Rules, 2016): for the control of hazardous waste
- Biomedical Waste Management Rules, 2016: for handling of waste generated from hospitals, super specialty centers, and nursing homes
- E-waste Management Rules, 2016: related to electrical and electronic-related waste.
- Plastic Waste Management Rules, 2016: for scientific disposal of plastic waste
- Construction and Demolition Waste Management Rules 2016: for waste generated from construction, remodeling, and repair and demolition of any civil structure

3.7.1.4 Sector Regulators

Details of MSW sector regulatory agencies are presented in Table 3.19.

Table 3.19: Municipal Solid Waste Sector Regulatory Agencies in India

Agency	Function
Central Public Health and Environmental Engineering Organisation (CPHEEO)	Assists the Ministry of Urban Development in urban water supply and sanitation including solid waste management in the country. It plays a vital role in processing the schemes posed for external funding agencies, including the World Bank, Japan Bank for International Cooperation, Asian Development Bank, and bilateral and multilateral funding agencies and institutional financing such as the Life Insurance Corporation of India.
Ministry of Environment, Forest and Climate Change	Involved in framing the rules for the management and handling of MSW under the (i) Environment (Protection) Act, (ii) Water (Prevention and Control of Pollution) Act, (iii) Air (Prevention and Control of Pollution) Act, and (iv) Central Pollution Control Board.
Ministry of New and Renewable Energy (MNRE)	MNRE supports MSW-based power generation projects.

MSW = municipal solid waste.

Source: Mott MacDonald.

3.7.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Power purchase agreement	✓	✓
Long-term waste supply contract	✓	✓
Capacity take-or-pay contract	✓	✓
Transmission and use of system agreement	✓	✓
Performance-based operation and maintenance contract	✓	✓
Engineering procurement and construction contract	✓	✓

3.7.2 Institutional Capacity for Implementation

3.7.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✗	✗

The Prime Minister of India launched the Swachh Bharat Mission in October 2014 and Smart City Mission in June 2015, aiming to create an efficient competitive market and to attract foreign investors. Total outlay for Swachh Bharat Mission is ₹620,090 million (\$9.54 billion). It covers all 4,041 statutory towns and proposes to achieve 70% of the funding from the private sector.

The Smart City Mission is proposed to be implemented through a special purpose vehicle (SPV) managed by the state governments for which the cabinet has approved ₹480,000 million (\$7.38 billion).

However, no data are available on the pipeline of particular projects to be taken up by PPP mode.

3.7.2.2 Project Preparation

	2016	2017
Number of PPP projects in preparation	-	-

3.7.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	no data	no data	no data
Unsolicited bids	no data	no data	no data
Competitive bidding process	no data	no data	no data
PPP projects currently in procurement	n/a	n/a	2 ^a

Note:

^a *The Pioneer of India*. 2017. RMC to Start Work on Integrated Municipal Solid Waste Management Project. 31 August. <http://www.dailypioneer.com/state-editions/raipur/rmc-to-start-work-on-integrated-municipal-solid-waste-management-project.html>; Government of Himachal Pradesh Department of Environment, Science and Technology of Himachal Pradesh Government. <http://www.desthp.nic.in/Tenders/Kufri%20RFP%20as%20on%2003-02-2018.pdf>.

3.7.3 Features of Past PPP Projects

3.7.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (\$ million)	107	107	-
PPP projects that reached financial close (number)	2	2	-

3.7.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	-	-	-
As a share of the total number of solid waste management PPP projects (%)	-	-	-

3.7.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support (number):			
Viability gap fund	no data	no data	no data
Government guarantees	no data	no data	no data
Projects on availability-/performance-based payment basis	no data	no data	no data

3.7.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism (number):			
User-paid contracts	no data	no data	no data
Government-paid contracts	no data	no data	no data

3.7.3.5 Tariffs

	2016	2017
Is there a system of feed-in tariff?	✓	✓
Is there tipping fees/gate fees?	✓	✓

The Central Electricity Regulatory Commission, through its order dated 31 May 2017,³⁵ has notified that the tariff for MSW and refused-derived, fuel-based projects will be project specific and not generic.

The Ministry of Power sets and also ensures compulsory purchase of power generated from such waste-to-energy plants, by the distribution company. The MNRE provides subsidy or incentive for the same.

³⁵ Government of India, Central Electricity Regulatory Authority Commission New Delhi. Date of Order: 31.05.2017. <http://www.cercind.gov.in/2017/whatsnew/sm5.pdf>.

3.7.3.6 Risk Allocation

Typical risk allocation arrangements in MSW PPP contracts are given in Table 3.20.

Table 3.20: Typical Risk Allocation Arrangements in Municipal Solid Waste PPP Contracts in India

Risk	Private	Public	Shared	Comment
Waste volume risk	✓	✓		This risk is allocated to the public sector in BOT and management contract, and to the private sector in BOOT-type PPP contracts.
Waste quality risk	✓			This risk is allocated to the private sector in BOOT-type PPP contracts.
Government payment risk	✓	✓		This risk is allocated to the public sector in BOT (and management contract and to the private sector in BOOT-type PPP contracts.
Environmental and social risk	✓		✓	This risk is allocated to the private sector in BOT and BOOT but is shared by management contract-type PPP contracts.
Land acquisition risk		✓		
Political risk		✓		

BOOT = build–own–operate–transfer, BOT = build–operate–transfer, PPP = public–private partnership.

Source: Public Private Partnerships in India. <https://www.pppinindia.gov.in> (accessed 06 February 2017).

3.7.4 Local Capabilities

Apart from the ULBs involved in the MSW management sector, there are a few leading MSW management service providers from the private sector undertaking design, procurement, and operations. Some well-known service providers from the private sector are

- Ramky Enviro Engineers,
- Samki Group,
- Antony Waste Handling Cell Private,
- SELCO International,
- Zanders Engineers,
- Jindal ITF Urban Infrastructure,
- Mailhem Engineers,
- Southern Cogen Systems,
- Mahindra Acres, and
- SENES.

3.7.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	-	-	-
PPP projects that received export credit agency/international financing institution support	-	-	-

3.7.6 Challenges

Specific challenges of progressing MSW PPP projects are provided in Table 3.21.

Table 3.21: Challenges of PPP Progress in the Municipal Solid Waste Sector in India

Challenges	Currently Implemented Tackling Measures
Insufficient sanitary landfill	In SWM 2016, detailed criteria have been established for setting up of solid waste processing and treatment facilities, SWM in hilly areas, waste-to-energy processing, sanitary landfills site selection, development of facilities at the sanitary landfills, specifications for landfilling operations and closure on completion of landfilling, and pollution prevention. Such measures should facilitate the introduction of new landfill and waste processing facilities and, therefore, the Ministry of Urban Development has released a ready reckoner on technologies in “Waste to Wealth” laying out various technology options available in converting waste to wealth resource. ^a
Lack of incentives for the private sector to invest	Revenue from recovery programs, on waste to energy and provision of user fees, are being proposed in SWM 2016.
Insufficient land allocation	SWM 2016 proposes identification of land and its inclusion in City Master Plan/City Development Plan.

MSW = municipal solid waste, PPP = public-private partnership, SWM = solid waste management.

^a Government of India, Ministry of Housing and Urban Affairs. <http://pib.nic.in/newsite/PrintRelease.aspx?relid=173995> (accessed on 10 March 2018).

Source: Mott MacDonald.

3.8 Water and Wastewater

3.8.1 Regulatory Framework

3.8.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Bulk water supply and treatment	100%	100%
Water distribution	100%	100%
Wastewater treatment	100%	100%
Wastewater collection	100%	100%

3.8.1.2 Government Contracting Agency

The Ministry of Water Resources, River Development and Ganga Rejuvenation is the principal entity responsible for water in India. It oversees the planning and development of the resource ranging from the policy formulation to infrastructure support, in consultation with state-level agencies and other ministries.

The National Mission on Clean Ganga is particularly active in this sector, and has adopted the hybrid annuity model (HAM) for wastewater treatment projects.

The Urban and Municipal Infrastructure Corporation is the contracting agency in the urban and town areas. The Jawaharlal Nehru National Urban Renewal Mission has been launched to finance urban water supply and sanitation through government grants. Its essential component is the Urban Infrastructure Development Scheme for Small and Medium Towns, which has subsumed the existing schemes of the Integrated Development of Small and Medium Towns and Accelerated Urban Water Supply Programme. Its aim is to improve infrastructural facilities, help create durable public assets and quality-oriented services in cities and towns, enhance PPP in infrastructural development, and promote the planned integrated development of towns and cities.³⁶

³⁶ Government of India, Ministry of Housing and Urban Affairs. 2012. *Present Status of JNNURM*. 6 December. <http://pib.nic.in/newsite/PrintRelease.aspx?relid=90058..>

3.8.1.3 Sector-Specific Regulations

	2016	2017
Can the private sector be given water abstraction rights?	✓	✓
Are there regulations in place on raw water extraction?	✓	✓
Are there regulations in place on treated effluent released?	✓	✓

There are guidelines and standards defined and implemented for industrial effluent discharge by the pollution control boards at the central and state levels. This board at the national level is known as the Central Pollution Control Board and, similarly, each state has its own Pollution Control Board.

The National Urban Sanitation Policy was implemented by the government in 2008, with the primary objectives of achieving the following: sanitized cities (free from open defecation), safe collection and treatment of all wastewater, elimination of manual scavenging, and collection and disposal of solid waste safely.

The National Water Policy (2002) prioritizes water use in the following order: drinking, irrigation, hydropower, ecology, agricultural and nonagricultural industries, navigation, and other uses. These priorities may be modified or added if warranted by the area- and region-specific considerations. The policy also encourages private participation in the planning and operation of water systems.

3.8.1.4 Sector Regulators

Details of water sector regulatory agencies are given in Table 3.22.

Table 3.22: Water Sector Regulatory Agencies in India

Agency	Function
Ministry of Water Resources, River Development and Ganga Rejuvenation	Responsible for laying down guidelines and programs for the development and regulation of the country's water resources
Central Ground Water Board	Responsible for carrying out scientific studies, exploration aided by drilling, monitoring groundwater regime, assessment, augmentation, and management and regulation of country's groundwater sources
Planning Commission	Allocation of funds
National Water Resource Council	All policy decisions taken in the country
National Water Development Agency	Carry out detailed studies (feasibility study, among others), surveys, and investigations with respect to peninsular components of the national perspective for water resource development

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Table 3.22 continued

Agency	Function
Ministry of Housing and Urban Affairs	Urban water supply and sanitation
Ministry of Drinking Water and Sanitation	Rural water supply and sanitation
Ministry of Environment, Forest and Climate Changes	Pollution control, deals with environmental laws and regulations
Ministry of Agriculture and Farmers	Improving water utilization efficiency in agriculture via PMKSY (Pradhan Mantri Krishi Sinchayee Yojana)
Central Pollution Control Board	Monitoring water quality
Municipal Corporation	Locally, these corporations provide services such as water supply, sanitation, health, drainage, and solid waste management

Source: Mott MacDonald.

3.8.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Water purchase agreement	✓	✓
Performance-based operation and maintenance contract	✓	✓
Engineering procurement and construction contract	✓	✓

3.8.2 Institutional Capacity for Implementation

3.8.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	×

The Government of India has developed national- and state-level strategies for the water and wastewater sectors. The responsibility for water supply and sanitation at the central and state levels are shared by various ministries. No overall plans can be identified for projects to be implemented on a PPP mode. However, the National Mission on Clean Ganga is quite active in the sector and is preparing a significant number of PPP projects through the HAM.

3.8.2.2 Project Preparation

	2016	2017
Number of PPP projects in preparation	n/a	6

3.8.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:	Numbers	Numbers	Numbers
Direct appointment	-	-	-
Unsolicited bids	13	13	-
Competitive bidding process	13	13	-
PPP projects currently in procurement	n/a	n/a	9

At the end of 2017, 15 PPP projects were being prepared or procured by the National Mission on Clean Ganga.³⁷

3.2.3 Features of Past PPP Projects

3.8.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (\$ million)	624	624	-
PPP projects that reached financial close (number)	16	16	-

³⁷ National Mission on Clean Ganga. Monthly Project Progress Report Search. <https://www.nmcg.nic.in/projectsearch.aspx>. (Database, needs access date).

3.8.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	9	9	-
As a share of the total number of water PPP projects	56%	56%	-

3.8.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support (number):			
Viability gap fund	8	8	-
Government guarantees	2	2	-
Projects on availability-/performance-based payment basis	7	7	-

3.8.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism (number):			
User-paid contracts	6	6	-
Government-paid contracts	7	7	-

3.8.3.5 Risk Allocation

Typical risk allocation arrangements for water PPP contracts are presented in Table 3.23.

Table 3.23: Typical Risk Allocation Arrangements in Water PPP Contracts in India

Risk	Private	Public	Shared	Comment
Demand risk	✓			
Revenue collection risk			✓	
Tariff risk		✓		
Government payment risk		✓		
Environmental and social risk	✓			The environmental procedures are complex and time-consuming
Land acquisition risk		✓		
Interface risk			✓	
Handover risk	✓			
Political risk		✓		
Foreign exchange risk		✓		

PPP = public-private partnership.

Source: Mott MacDonald.

3.8.4 Nonrevenue Water and Infiltration

	2016	2017
Nonrevenue water (%)	no data	no data
Nonrevenue water (m³/km/day)	no data	no data
Infiltration	no data	no data

km = kilometer, m³ = cubic meter.

3.8.5 Local Capabilities

There are a number of leading, local companies specializing in water and wastewater sector PPP projects, some of which are listed below:

- SPML Infra
- VA Tech Wabag
- L&T
- Veolia Water India
- IL&FS
- Gammon India
- Vishvaraj Infrastructure

3.8.6 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	-	-	-
PPP projects that received export credit agency/international financing institution support	1	1	-

ADB actively participated in the Agartala Water Supply project development.

3.8.7 Challenges

Specific challenges of progressing water PPP projects are given in Table 3.24.

Table 3.24: Challenges of PPP Progress in the Water Sector in India

Challenges	Currently Implemented Tackling Measures
Project preparation and lack of information: The absence of adequate pre-project development activities reduces the interest of private players as does the lack of information made available to bidders.	
Obtaining statutory approvals and clearances:	The Government of India has implemented the single window clearance, which should ease the process of getting approvals from the relevant departments.
Lack of institutional capacity: The limited institutional capacity to undertake large and complex projects at various central ministries, especially at level of state and local bodies, hinder the translation of targets into actual projects.	
Finance availability: The private sector is dependent on commercial banks to raise debt for PPP projects. With commercial banks reaching their sectoral exposure limits, and large Indian infrastructure companies being highly leveraged, financing the PPP projects is becoming difficult.	

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Table 3.24 *continued*

Challenges	Currently Implemented Tackling Measures
Quality of domestic sewage: Domestic wastewater gets mixed up with industrial effluents, which fouls up the sewage treatment works, resulting in downtime issues and unforeseen increases in operating costs.	

PPP = public-private partnership.

Source: Mott MacDonald.

3.9 Social Infrastructure

3.9.1 Regulatory Framework

3.9.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Healthcare infrastructure	100%	100% ^a
Healthcare services	100%	100%
Education infrastructure	100%	100%
Education services	100%	100%
Government buildings	0%	0%
Prisons and correction centers	0%	0%
Social housing	0%	0%
Sport and leisure facilities	100%	100%

Note:

^a India Brand Equity Foundation. IBEF Industry Presentation. Healthcare-January 2018. <https://www.ibef.org/download/Healthcare-January-2018.pdf>.

There are two routes by which India gets FDI: the automatic route and the government route. Under the automatic route, FDI is allowed without prior approval by the government or the Reserve Bank of India (RBI). Under the government route, prior approval by the government is needed. Under the automatic route, 100% FDI is allowed for greenfield projects. Under the government route, up to 100% FDI is permitted for brownfield project investments. In the education sector, the government allows 100% FDI, through the automatic route.

The government allows 100% FDI in the health sector.

The Union Cabinet has approved 100% FDI under the automatic route in the construction development segment, which includes townships, housing, built-up infrastructure, and real estate broking services, clarifying that real estate brokerage services do not amount to real estate business and are, therefore, eligible for 100% FDI under the automatic route.³⁸

3.9.1.2 Government Contracting Agency

At the central level, the Ministry of Human Resource Development is the government contracting agency (GCA) for PPP in the education sector. The Ministry of Health and Family Welfare is the GCA for PPP in the healthcare sector.

While at the local level, the Departments of School, Higher and Technical Education of various state governments also act as the contracting agency for PPP in education, and the Department of Health and Family Welfare acts as the contracting agency for PPP projects for healthcare sector.

3.9.1.3 Sector-Specific Regulations

	2016	2017
Can the private sector be given rights to provide education services?	✓	✓
Can the private sector be given rights to provide healthcare services?	✓	✓

3.9.1.4 Sector Regulators

Details of social infrastructure sector regulatory agencies are presented in Table 3.25.

Table 3.25: Social Infrastructure Sector Regulatory Agencies in India

Agency	Function
Ministry of Human Resource Development	<p>Formulating the national policy on education. Plans development, including expanding access and improving quality of the educational institutions throughout the country, including in the regions where people do not have easy access to education</p> <p>Provides financial help in the form of scholarships, loan subsidy, among others, to deserving students from deprived sections of the society</p> <p>Encourage international cooperation, including working closely with the UNESCO and foreign governments as well as universities, to enhance the educational opportunities</p> <p>Regulator for PPP in education</p>

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³⁸ The Hindu Business Line. 2018. Realty sector eligible for 100% FDI via automatic route. 10 January. <https://www.thehindubusinessline.com/economy/policy/realty-sector-eligible-for-100-fdi-via-automatic-route/article10024720.ece>.

Table 3.25 continued

Agency	Function
Ministry of Health and Family Welfare	Ministry of Health and Family Welfare deals with medical and public health matters, including drug control and prevention of food adulteration as well as family welfare programs aimed at population stabilization consistent with the requirements of economic growth, social development, and environmental protection. Regulator for PPP in healthcare in India.

PPP = public-private partnership; UNESCO = United Nations Educational, Scientific and Cultural Organization.

Source: Mott MacDonald.

3.9.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Performance-based operation and maintenance contract	✓	✓
Engineering procurement and construction contract	✓	✓

3.9.2 Institutional Capacity for Implementation

3.9.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

PPP pipeline of social infrastructure projects is listed in Table 3.26.

Table 3.26: PPP Pipeline of Social Infrastructure Projects in India

No.	Project Name	Location	Value (\$ million)
1	Odisha state government is planning to develop 19 hospitals having 2,600 beds under PPP mode.	Odisha, India	12,000

Source: *Business Standard*. 2017. Odisha Plans 19 Hospitals in PPP Mode with an Outlay of Rs1,200 Cr. 28 November. http://www.business-standard.com/article/economy-policy/odisha-plans-19-hospitals-in-ppp-mode-with-an-outlay-of-rs-1-200-cr-117112800876_1.html.

3.9.2.2 Project Preparation

	2016	2017
Number of PPP projects in preparation	n/a	-

3.9.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:	(number)	(number)	(number)
Direct appointment	no data	no data	-
Unsolicited bids	no data	no data	-
Competitive bidding process	no data	no data	-
PPP projects currently in procurement	n/a	n/a	-

3.9.3 Features of Past PPP Projects

3.9.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (\$ million)	590.2	590.2	-
PPP projects that reached financial close (number)	7	7	-

There are seven PPP projects that have reached financial closure, of which Shillong PPP, Kalamboli Territory Projects, Ranchi Hospital PPP, Bolnagar Medical College PPP, and Educomp India schools) are design-build-finance-maintain-operate/design-build-finance-operate-transfer contracts.

3.9.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	1	1	-
As a share of the total number of social PPP projects	14%	14%	-

Gurgaon Medanta Hospital PPP is the only PPP with foreign sponsor participation.

3.9.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support (number):			
Viability gap fund	no data	no data	-
Government guarantees	no data	no data	-
Projects on availability-/performance-based payment basis	no data	no data	-

3.9.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism (number):			
User-paid contracts	no data	no data	-
Government-paid contracts	no data	no data	-

3.9.3.5 Risk Allocation

Typical risk allocation arrangements for key risks in social infrastructure PPP contracts are presented in Table 3.27.

Table 3.27: Typical Risk Allocation Arrangements in Social Infrastructure PPP Contracts in India

Risk	Private	Public	Shared	Comment
Government payment risk	✓			
Land acquisition risk			✓	
Political risk			✓	

PPP = public–private partnership.

Source: Mott MacDonald.

3.9.4 Local Capabilities

No information available.

3.9.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	-	-	-
PPP projects that received export credit agency/international financing institution support	-	-	-

3.9.6 Challenges

Specific challenges of progressing social infrastructure PPP projects are given in Table 3.28.

Table 3.28: Challenges of PPP Progress in the Social Infrastructure Sector in India

Challenges	Currently Implemented Tackling Measures
Education	
Regulatory environment: There is no independent PPP regulator in India currently. To attract more domestic and international private funding of infrastructure, a more robust regulatory environment, with an independent regulator, is essential.	
Weakness in enabling policies	
Insufficient instruments to meet long-term equity and debt financing	
Low acceptance of PPPs by private and government stakeholders	
Absence of required coordination between the central and state governments and agencies: Inadequate management capacity within government to manage the design, implementation, and evaluation processes. Inadequate capacity to develop bankable education sector projects	
Healthcare	
Lack of direction from the state governments in identifying areas where partnership is possible	
No policy to include private sector participation in the healthcare governing body: This is negatively impacting the equitable representation of both private and public sector interests.	

PPP = public–private partnership.

Source: Mott MacDonald.

3.10 Information and Communication Technology

3.10.1 Regulatory Framework

3.10.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Communication		
Fixed line infrastructure	100%	100%
Fixed line services	100%	100%
Wireless/mobile infrastructure	100%	100%
Wireless/mobile services	100%	100%
Information technology	100%	100%

For the telecom sector, FDI up to 49% is allowed under the automatic route and beyond 49%³⁹ through approval from the Department of Telecommunication. FDI of 100% is allowed through the automatic route for manufacturing of telecom equipment.

3.10.1.2 Government Contracting Agency

- The Ministry of Communications is the competent authority to enter contracts for the telecom sector.
- The Ministry of Electronics and Information Technology is the competent authority to enter contracts for information technology.

3.10.1.3 Sector-Specific Regulations

- The Telecom Regulatory Authority of India Act, 1997, came into effect in February 1997 to regulate telecom services and tariffs, protecting both telecom service providers and consumers.
- The Information Technology Act (2000), provides legal framework for electronic business transactions by recognizing digital signatures and electronic records, giving legal recognition to e-commerce transactions. The act was further amended in 2008, providing framework for data protection and protection against cybercrimes/terrorism.
- The current National Telecom Policy (2012) aims to transform the socioeconomic scenario through accelerated equitable and inclusive economic growth by laying

³⁹ Government of India, Ministry of Communications. *FDI Policy in Telecom*. <http://www.dot.gov.in/fdi-policy-telecom>.

special emphasis on providing affordable and quality telecommunication services in rural areas, and to create an investor-friendly environment for attracting additional investments in the sector apart from generating employment opportunities in various segments of the sector.⁴⁰

- Other applicable laws that govern this sector include the Indian Telegraph Act (1885) and the Indian Wireless Telegraphy Act (1933).⁴¹

3.10.1.4 Sector Regulators

Details of information and communication technology (ICT) sector regulatory agencies are presented in Table 3.29.

Table 3.29: Information and Communication Technology Sector Regulatory Agencies in India

Agency	Function
Ministry of Communication	Overall communication sector management and strategy
Department of Telecommunication	Responsible for policy implementation, licensing, and coordination matters relating to telegraphs, telephones, wireless, data and telematics services, and other similar forms of communications
Telecom Regulatory Authority of India	Responsible for the development of directives, regulations, and orders that deal with various subjects, such as interconnection, service quality, and tariff
Ministry of Electronics and Information Technology	Overall infrastructure management and strategy

Source: Mott MacDonald.

3.10.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
PPP/managed service/management agreement	✓	✓
PPP/turnkey agreements	✓	✓
PPP/lease agreement	✓	✓

⁴⁰ Government of India, Ministry of Communications. *New Telecom Policy, 1999*. <http://www.dot.gov.in/new-telecom-policy-1999#>; <http://www.dot.gov.in/relatedlinks/national-telecom-policy-2012>.

⁴¹ World Bank Group. Telecommunications - Laws, Regulations and Licenses. <https://ppp.worldbank.org/public-private-partnership/sector/telecom/laws-regulations#india>.

3.10.2 Institutional Capacity for Implementation

3.10.2.1 Project Planning

	2016	2017
Communication		
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✗	✗
Information technology		
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✗	✗

3.10.2.2 Project Preparation

	2016	2017
Number of PPP projects in preparation	n/a	-

3.10.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:	(number)	(number)	(number)
Direct appointment	-	-	-
Unsolicited bids	6	6	-
Competitive bidding process	-	-	-
License scheme	-	-	-
PPP projects currently in procurement	n/a	n/a	-

3.10.3 Features of Past PPP Projects

3.10.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects reached financial close (\$ million)	3,593	3,593	-
PPP projects reached financial close (number)	6	6	-

3.10.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	-	-	-
As a share to the total number of information and communication technology PPP projects	0%	0%	-

3.10.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects received government support (number)	-	-	-

3.10.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism (number):			
User-paid contracts	3	3	-
Government-paid contracts	-	-	-

3.10.3.5 Tariffs

	2016	2017
Is there a system of tariffs?	✓	✓

Differential pricing is common in India, depending on the demand, volume, location, among others. Tariffs are set by private players in line with Telecom Regulatory Authority of India regulations for the telecom sector and Ministry of Electronics and Information Technology for the information technology sector.

3.10.3.6 Risk Allocation

Typical risk allocation arrangements in ICT PPP contracts are provided in Table 3.30.

Table 3.30: Typical Risk Allocation Arrangements in Information and Communication Technology PPP Contracts in India

Risk	Private	Public	Shared	Comment
Demand risk		✓		
Revenue collection risk	✓			
Tariff risk	✓			
Government payment risk	✓			
Operational risk	✓			
Environmental and social risk				
Permits			✓	Depending on the permit
Handover risk	✓			
Political risk		✓		Discriminatory changes in law and expropriating actions
Regulatory risk			✓	Delay in issuance of regulatory approvals leads to increase in cost and delays in implementation
Technology and obsolescence risk	✓			
Residual cost	✓			Operator will face decommissioning cost

PPP = public-private partnership.

Source: Mott MacDonald.

3.10.4 Local Capabilities

Indian information technology companies are capable of offering efficient solutions of high quality at low cost. Many foreign companies have outsourced their work to India, resulting in an increase in the number of business process outsourcing companies in the country. Indian information technology companies have increased their global presence by opting for cross-border acquisition as well as organic growth. The sector has witnessed increasing government spending in information technology to modernize the public sector.

The telecom industry is a highly competitive industry. The service providers are focused on specific regional markets, particularly in the highest revenue-earning areas such as Delhi, Mumbai, and Chennai.

3.10.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	–	–	–
PPP projects that received export credit agency/international financing institution support	1	1	–

3.10.6 Challenges

Specific challenges of progressing ICT PPP projects are discussed in Table 3.31.

Table 3.31: Challenges of PPP Progress in the Information and Communication Technology Sector in India

Challenges	Currently Implemented Tackling Measures
Lack of ICT infrastructure in the public sector	NIC has been developing ICT infrastructure for the public sector by linking all ministries/ departments across India through its ICT network “NICNET”
Regulatory environment and complex structure of government bodies: leading to delay in project implementation and higher transaction cost	New PPP framework addressing the concerns of the private parties has improved regulatory environment
Lack of information/comprehensive database: leading to overestimation of the potential demand for services, leading to erroneous pricing of services, and hence significant fluctuation in the actual project cost compared to original budgets	NIC has set up national and state data centers for the management of information system and data streams across national and state ministries/ departments. National Knowledge Network has been set up for institutions/organizations for carrying out research and development

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Table 3.31 continued

Challenges	Currently Implemented Tackling Measures
Long-term agreements are subject to technology and market uncertainty: entailing large cost risk to public and private parties	

ICT = information and communication technology, NIC = National Informatics Centre, PPP = public-private partnership.

Source: Mott MacDonald.

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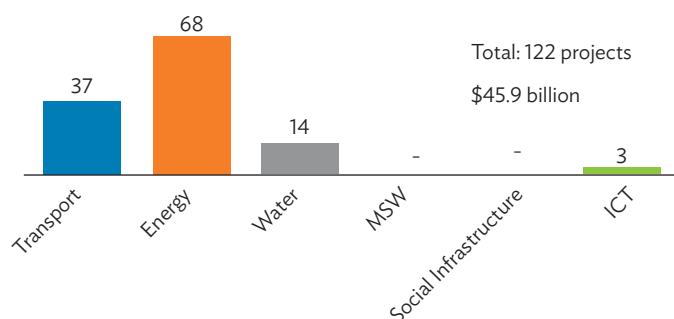
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4. INDONESIA

The history of public–private partnership (PPP) development in Indonesia¹ dates back to the early 1990s, when the first projects with private sector participation in the toll road and energy sectors were implemented. In the Indonesian context, PPPs were formally introduced as a modality in 2005, and energy projects, included in the charts in this section, are excluded. Since then, Indonesia has made continuous efforts to institutionalize and promote PPP arrangements by enhancing the PPP regulatory framework. Indonesia now has a PPP Joint Office, project development fund (PDF), guarantee facility, and a land acquisition financing mechanism. Many regulations have also been introduced.

Figure 4.1: PPP Projects in Indonesia that Have Reached Financial Close, (1990–2017)



ICT = information and communication technology, MSW = municipal solid waste, PPP = public–private partnership.

Sources: IJGlobal. *IJGlobal Project Finance and Infrastructure Journal*. <http://www.ijglobal.com>;
World Bank Group. 2015. *World Bank Asia Pacific Private Participation in Infrastructure (PPI) Database*.
<http://ppi.worldbank.org/> (accessed 22 January 2018).

The latest development was the issuance of PPP regulations in 2015—including Presidential Regulation No. 38 of 2015, which upgraded the PPP framework in the following respects:

- Introduction of availability/performance payment scheme as a source of investment return, in addition to traditional user payment method. This can now be applicable for

¹ The *PPP Monitor* is envisaged to be a dynamic product and comments for improving data quality are welcome and can be incorporated in future editions. It should also be noted that the report is using standardized definitions which may not match a particular developing member country's definitions. For the meaning of each indicator, please refer to the Appendix.

sectors where government is not a direct offtaker of the services (i.e., outside of power generation and bulk water supply).

- Expansion of PPP sectoral coverage to social infrastructure (including urban, educational, tourism, sports, health facilities, and public housing). The regulation also enables two types of infrastructure to be bundled as a single PPP project.
- The regulation provides more details on government's support for land acquisition, guarantees, and tax incentives.
- Acceleration of procurement process, allowing direct appointment under specific conditions.
- Formally allowing state-owned or regionally owned enterprises to be contracting agencies allowing such enterprises to use the PPP framework instead of the business-to-business arrangements based on the sector legal framework.

Procedural guidelines for PPP development and procurement have been fine-tuned in the Ministry of National Development Planning/National Development Planning Agency (BAPPENAS) Regulation No. 4 of 2015, which provides detailed requirements in each project preparation stage: (i) planning (identification, budgeting, categorization); (ii) preparation (prefeasibility study, government support, guarantees); and (iii) transaction (market sounding, public tender, agreement, financial close). The BAPPENAS 2017 PPP book presents PPP pipelines in a number of sectors (Figure 4.2).²

Figure 4.2: Availability of PPP Pipelines in Indonesia by Sector

Transport	Energy	Water and wastewater
Municipal solid waste	ICT	Social infrastructure
	The pipeline is developed with more than five projects	
	Less than five projects	
	No definitive plans for PPP projects	

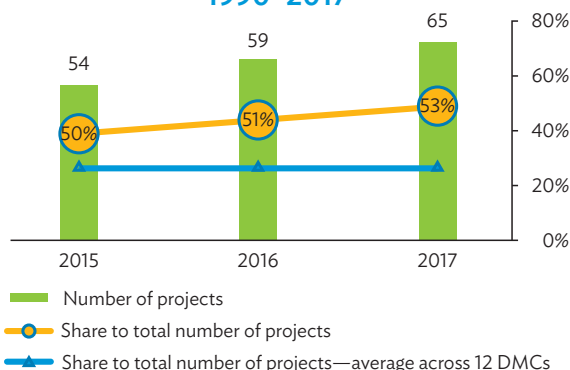
ICT = information and communication technology, PPP = public-private partnership.

Source: Mott MacDonald.

Participation of foreign investors and lenders has been growing over the last 3 years, with the share of such projects being well above regional average. The largest proportion of foreign sponsors has been observed in water and energy PPP projects, while the largest proportion of foreign lenders has been in the energy sector (Figure 4.4).

² The projects included are published in the official sources.

Figure 4.3: PPP Projects in Indonesia with Foreign Sponsor Participation, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Figure 4.4: Share of PPP Projects in Indonesia with Foreign Sponsor Participation by Sector, 1990–2017

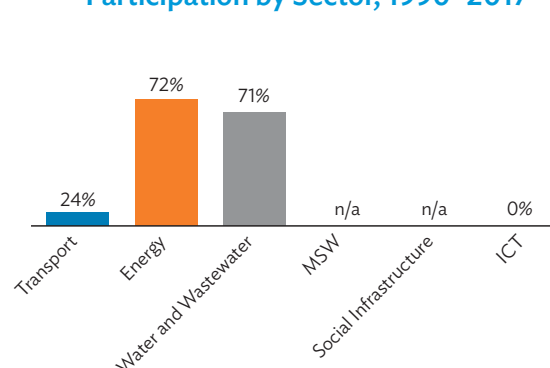
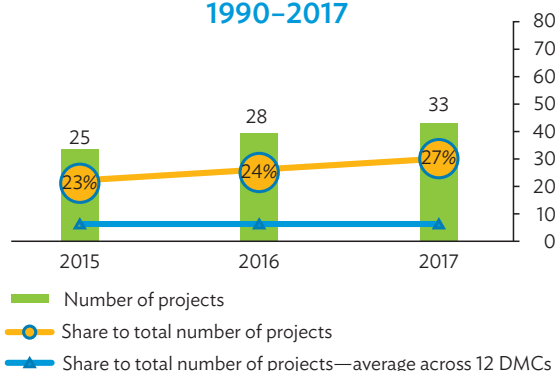


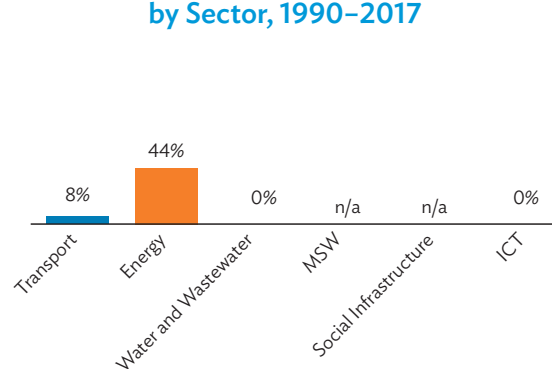
Figure 4.5: PPP Projects in Indonesia with Foreign Lender Participation, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste.

Source: Mott MacDonald.

Figure 4.6: Share of PPP Projects in Indonesia with Foreign Lender Participation by Sector, 1990–2017

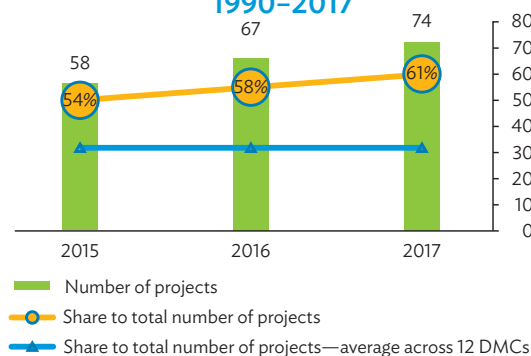


Notable development has been the recent implementation of three PPP projects in the information and communication technology (ICT) sector on availability/performance payment basis, as previously only projects in the energy sector were enjoying such mechanisms.

The share of PPP projects with financing support from export credit agency (ECA)/international financing institution (IFI) grew to 28% in 2017 from 21% in 2015, which was above the regional average (Figure 4.9).

ECAs, foreign banks backing foreign investors, and multilateral agencies dominate the project financing market in Indonesia. Domestic banks mainly focus on commercial loans. The involvement of ECAs is required as historically local suppliers have been unable to provide

Figure 4.7: PPP Projects in Indonesia on Availability/Performance Payment Basis, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Figure 4.8: Share of PPP Projects in Indonesia on Availability/Performance Payment Basis by Sector, 1990–2017

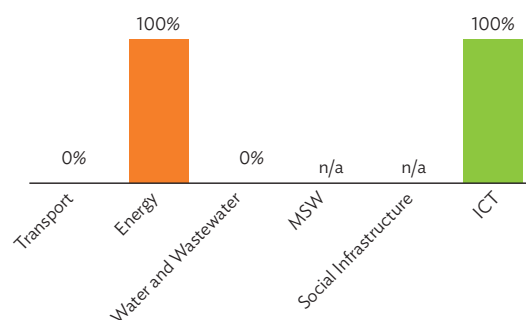
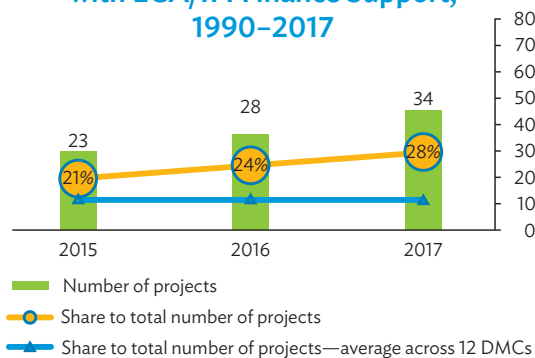


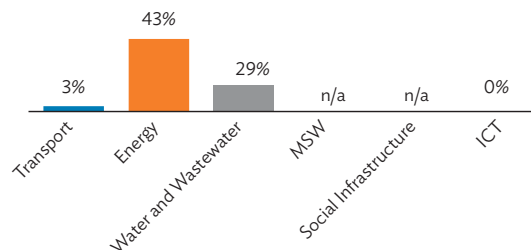
Figure 4.9: PPP Projects in Indonesia with ECA/IFI Finance Support, 1990–2017



DMC = developing member country, ECA = export credit agency, ICT = information and communication technology, IFI = international financing institution, MSW = municipal solid waste

Source: Mott MacDonald.

Figure 4.10: PPP Projects in Indonesia with ECA/IFI Finance Support by Sector, 1990–2017

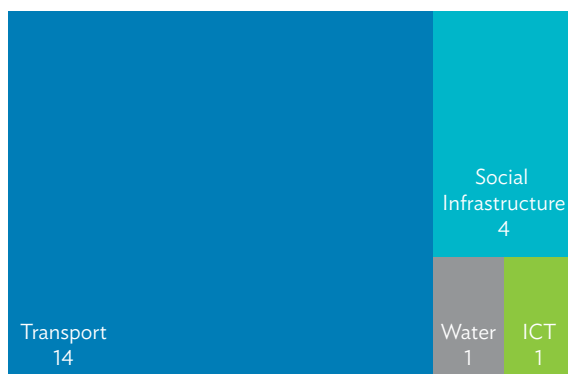


large equipment for projects. The financing is available from commercial banks on a limited/nonrecourse basis in both hard and local currencies, as well as from public sector banks with the favorable tenors of maximum of 15–20 years.

However, challenges to PPP implementation remain in Indonesia.

One of the major impediments had been a land acquisition process which stalled quite a few PPP projects in the past. To speed up the land acquisition process, in 2012, a new law on land acquisition in public interest was adopted followed by the implementation of a series of rules and regulations. In 2015, the Government of Indonesia issued the fourth revision of the land

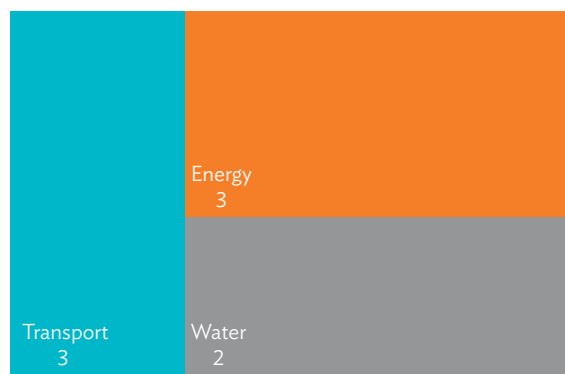
**Figure 4.11: PPP Projects in Indonesia
Currently in Preparation, 2017**



ICT = information and communication technology.

Source: Mott MacDonald.

**Figure 4.12: PPP Projects in Indonesia
Currently in Procurement, 2017**



acquisition regulation under the Presidential Regulation No. 148 of 2015. The law limits the land acquisition procedure to approximately 512 days and allows for revocation of land rights in public interest. To further speed up the process, the regulations also enable the private sector to acquire the land on behalf of the government contracting agency (GCA) and seek reimbursement from the government afterward. Specifically, in 2015, a bridging finance mechanism was set up at the Ministry of Finance (MOF) to enable timely reimbursement of land acquisition cost to the project investors.

Another challenge of PPPs in Indonesia is the limited capacity of GCAs to properly prepare project preparation studies highlighting the factors that constrain and delay the project's readiness for the market. The government is addressing this issue by various modes: a more active support to the GCAs through the MOF's PPP Unit and the Committee on Acceleration of Priority Infrastructure delivery, which employs qualified advisors to ensure quality project preparation. However, this takes place only for certain PPP projects, and the PPPs are yet to become a regular modality for the GCAs to deliver their investment programs.

The public sector in Indonesia is decentralized and is characterized by multiple levels of government agencies. The lack of coordination between multiple government stakeholders and lack of clarity on the responsibilities of each agency during PPP project preparation and approval have often been a cause of project delays, particularly in relation to decision making.

Key Developments from 2016

There have been no particular changes of significance since 2016 in the PPP environment in Indonesia.

4.1 Country Profile

4.1.1 Regulatory Framework

4.1.1.1 PPP Law

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

	1990– 2016	1990– 2017	In 2017
Number of PPP projects that reached financial close under the latest PPP law	11	18	7

The latest key regulations are as follows:

- Presidential Regulation No. 38 of 2015 on Cooperation Between Government and Business Entities in Procurement of Infrastructure (PPP Regulation),
- BAPPENAS Regulation No. 4 of 2015 on Procedure for Cooperation between Government and Business Entities in Procurement of Infrastructure, and
- Government Goods and Services Procurement Policy (LKPP) Regulation No. 19 of 2015 concerning Procurement Procedure for Partnership between Government and Business Entities in Procurement of Infrastructure.

It should be noted that since the 1990s, a large number of infrastructure PPP projects—especially energy independent power producer (IPP) projects and toll roads—have been implemented under specific sectoral laws rather than under PPP framework. These sectoral laws stipulate different preparation, approval, and procurement procedures. Please refer to the respective sector sections for some details.

4.1.1.2 PPP Types

	2016	2017
Number of PPP types defined in the PPP regulations	3	3

Regulations do not define specific types of PPP contracts, rather the source of investment return is specified, which can be

- user payment,
- availability-/performance-based
- other forms that do not conflict with the legislation.

The availability-/performance-based payment scheme is a new model introduced in the latest law.

Typically, a range of PPP types are allowed in Indonesia, but these can be sector dependent. The possible arrangements include build-operate-transfer (BOT), build-operate-own-transfer (BOOT), design-build-operate-maintain, design-build-finance-operate, lease-develop-operate, operation and maintenance (O&M), as well as other variants and similar arrangements.

4.1.1.3 Eligible Sectors

	2016	2017		2016	2017
Transport			Energy		
Roads	✓	✓	Power generation	✓	✓
Railways	✓	✓	Power transmission	✓	✓
Ports	✓	✓	Power distribution	✓	✓
Airports	✓	✓	Oil and gas	✓	✓
Water and wastewater	✓	✓	Information and communication technology	✓	✓
Municipal solid waste	✓	✓	Social infrastructure	✓	✓

Note: In the context of negative investment list, all references to 2016 are assumed to be after the issuance of Presidential Regulation No. 44 of 2016.

The regulation also enables two types of infrastructure to be bundled as one PPP project.

4.1.1.4 Other Applicable Restrictions

	2016	2017
Project funding structure	In general, the Indonesia Investment Coordinating Board requires a debt-equity ratio of 3:1 of the required investment amount. However, this number may vary depending on the nature of the project.	In general, the Indonesia Investment Coordinating Board requires a debt-equity ratio of 3:1 of the required investment amount. However, this number may vary depending on the nature of the project.
Project capital investment size	For foreign investments in the form of participation in a project company, the general investment requirement is Rp10 billion. However, this number may vary depending on the nature of the project.	For foreign investments in the form of participation in a project company, the general investment requirement is Rp10 billion. However, this number may vary depending on the nature of the project.

4.1.1.5 Unsolicited Bids

	2016	2017
Acceptance of unsolicited proposals	✓	✓
Eligibility of project proponent to have:		
Competitive advantage at bid evaluation	✓	✓
Swiss challenge	✓	✓
Compensation of the project development cost	✓	✓
Government support for land acquisition and resettlement cost	✓	✓
Government support in the form of viability gap fund and guarantees	✓	✓

Unsolicited proposals can be submitted by business entities under the following conditions: the projects are economically and financially feasible, the projects are technically integrated with the sector master plan, and the project proponent has the capacity to finance the project. The project proponent is entitled to receive one of three forms of compensation: 10% additional value, right to match the offer of the first-ranked bidder, or compensation of development cost. However, no detailed procedure has been developed yet for the mentioned ways of treatment of unsolicited proposals.

Government guarantees may also be given in accordance with the applicable legislation.

4.1.1.6 Institutional PPPs

	2016	2017
Are institutional PPP arrangements allowed (e.g., joint venture between government or state-owned enterprises and private firms as a special purpose vehicle company)?	✓	✓

	1990–2016	1990–2017	In 2017
Institutional PPP projects (number)	15	15	-
Institutional PPP projects (as a share to the total number of PPP projects)	13%	12%	-

4.1.1.7 Land Rights

	2016	2017
Which of the following is permitted to the private partner?		
Transfer land lease/use/ownership rights to third party	✓	✓
Use leased/owned land as collateral	✓	✓
Mortgage leased/owned land	✓	✓
Is there any legal mechanism for granting wayleave rights, for example, laying water pipes or fiber cables over land occupied by persons other than government or the private partner?	✓	✓
Is there land registry/cadastre with public information on land plots?	✓	✓
Which of the following information on land plots is available to private partner?		
Appraisal of land value	✓	✓
Landowners	✓	✓
Land boundaries	✓	✓
Utility connections	✓	✓
Immovable property on land	✓	✓
Plots classification	✓	✓

Hak milik (right to own land) is limited to individuals of Indonesian nationality and certain legal entities (e.g., government banks, religious groups). *Perseroan terbatas* (limited liability companies) are not allowed to obtain *hak milik*, irrespective of their shareholding structure. Nevertheless, foreign companies (in the form of *penanaman modal asing*) as well as domestic companies may hold the following land-related rights:

- *Hak guna bangunan* (right to build),
- *Hak guna usaha* (land cultivation rights title), and
- *Hak pakai* (right to use).

The key regulations pertaining to land acquisition have been stipulated through

- Law No. 2 of 2012;
- Presidential Regulation No. 71 of 2012, as lastly amended by Presidential Regulation No. 148 of 2015 (Presidential Regulation No. 71 of 2012); and
- Regulation of National Land Agency No. 5 of 2012.

Law No. 2 of 2012 sets out that land procurement for public interest shall be conducted by the government in line with regional spatial layout plans, regional development plans, strategic plans, working plans, and with adequate and fair compensation. Its implementing regulation, Presidential Regulation No. 71 of 2012, provides the maximum duration for land acquisition is estimated to be 512 working days.

The compensation, determined by an independent appraiser, shall be sourced from the national budget and/or the regional budget, although if a project is financially feasible, the project company may pay back some or the entire land acquisition cost (according to Presidential Regulation No. 38 of 2015).

It is also possible for the private sector to finance the land procurement using its own funds before seeking reimbursement from the government once the land acquisition completed.

4.1.1.8 Environmental and Social Issues

	2016	2017
Is there local regulation establishing process for environmental impact assessment?	✓	✓
Is there legal mechanism for private partner to limit environmental liability for what is outside of its control or is caused by third parties?	✓	✓
Is there local regulation establishing process for social impact assessment?	✓	✓
Is there involuntary land clearance for PPP projects?	✓	✓

4.1.1.9 Foreign Investor Participation Restrictions

Maximum allowed foreign ownership of equity in greenfield projects^a

	2016	2017		2016	2017
Transport			Energy		
Roads ^b	100%	100%	Power generation ^c	100%	100%
Railways	49%	49%	Power transmission ^d	100%	100%
Ports	49%	49%	Power distribution ^e	100%	100%
Airports	49%	49%	Oil and gas ^f	75%	75%
Water and wastewater			Municipal solid waste^g		
Bulk water supply and treatment	n/a	n/a	Social infrastructure		

Maximum allowed foreign ownership of equity in greenfield projects

Water distribution	n/a ^b	n/a	Healthcare infrastructure ⁱ	67%	67%
Wastewater treatment	100%	100%	Healthcare services ^j	67%	67%
Wastewater collection	100%	100%	Education infrastructure ^k	67%	67%
Information and communication technology			Education services ^l	67%	67%
Fixed line infrastructure	67%	67%	Government buildings ^m	67%	67%
Fixed line services	67%	67%	Prisons and correction centers	100%	100%
Wireless/mobile infrastructure	67%	67%	Social housing	100%	100%
Wireless/mobile services	67%	67%	Sport and leisure facilities ⁿ	67%	67%

Notes:

^a In practice, the foreign ownership may also subject to the internal policies of the Investment Coordinating Board of the Republic of Indonesia (*Badan Koordinasi Penanaman Modal*, or BKPM), which is not published or available to the public.

^b This refers to toll road.

^c Applies to power generation projects above 10 megawatts (MW) over the duration of concession period, provided that the projects use PPP scheme; otherwise, it is 95%.

^d Applies to projects under PPP scheme; otherwise, it is 95%.

^e Hybrid arrangements are allowed only if SOE minority partner in the SPV and only for strategic or specific reason that justify SOE participation.

^f This restriction applies to the platform construction service. Other oil and gas services may be subject to a different amount of restriction.

^g Excludes hazardous waste.

^h Water Law 2004 was revoked in 2015. Please see section 4.7.1.3 for details.

ⁱ This refers to hospital. Investors from ASEAN countries: Max. 70%; can be conducted in all capital cities of provinces in Eastern Indonesia, except for in Makassar and Manado.

^j Investors from ASEAN countries: Max. 70%; can be conducted in all capital cities of provinces in Eastern Indonesia, except for in Makassar and Manado.

^k Investors from ASEAN countries: Max. 70%.

^l This refers to nonformal education services.

^m This refers to the construction and/or management of most of the government buildings. Some specific buildings may be subject to a different amount of restriction.

ⁿ This applies to most of the sports and leisure facilities. Some specific businesses may be subject to a different amount of restriction.

Is there any restriction for foreign investors on:	2016	2017
Land use/ownership rights as opposed to similar rights of local investors?	yes	yes
Currency conversion?	yes	yes
	1990–2016	1990–2017
PPP projects with foreign sponsor participation (number)	59	65
PPP projects with foreign sponsor participation (as a share to the total number of PPP projects)	51%	53%
		In 2017
		86%

4.1.1.10 Dispute Resolution and Enforcement Mechanism

	2016	2017
Can foreign law be chosen to govern PPP contracts?	x	x
What dispute resolution mechanisms are available for PPP agreements?		
Court litigation	✓	✓
Local arbitration	✓	✓
International arbitration	✓	✓
Has the country signed New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?	✓	✓

PPP regulations (both old and new) prescribe PPP contracts to determine the dispute resolution mechanism. However, there are no standard dispute resolution procedures for PPPs as there are no model concession documents available. Most contractual disputes for “less-than-termination” events are resolved through negotiation. If unresolved, domestic or international arbitration is called for, commonly with the Singapore International Arbitration Centre.

Indonesia has ratified the New York Convention; however, for foreign arbitral awards to be recognized and enforced within the jurisdiction of the Republic of Indonesia, such awards must satisfy the following requirements:

- The awards are rendered by an arbitration body or by an arbitrator in a country which is bilaterally bound to Indonesia or jointly bound with Indonesia by an international convention on the recognition and enforcement of foreign arbitral awards. Its enforcement is based on the principle of reciprocity.
- Foreign arbitral awards are only limited to those which, according to Indonesian law, fall within the scope of its commercial law.

- Foreign arbitral awards do not contravene public order.
- Foreign arbitral awards may be enforced in the Republic of Indonesia after an exequatur (writ of execution) has been obtained from the chairman of the Central Jakarta District Court.

However, provisions by which the parties can bring a dispute either to the courts or to arbitration are open to different interpretations, which may have a bearing on the effectiveness of such provisions. There have been cases where Indonesian courts have decided that an arbitration provision will prevail when there is an uncertainty as to which forum, as between the arbitration and court, would apply in a particular dispute.

4.1.1.11 Lender's Security Rights

	2016	2017
Does the law specifically enable lenders the following rights?		
Security over the project assets ^a	✓	✓
Security over the land on which they are built (land use right)	✓	✓
Security over the shares of PPP project company	✓	✓
Can there be a direct agreement between government and lenders?	✓	✓
Do lenders get priority in the case of insolvency? ^b	✓	✓
Can lenders be given step-in rights?	✓	✓

Notes:

^a To the extent such assets are owned by the project company.

^b Only secured lenders.

4.1.1.12 Termination and Compensation

	2016	2017
Does the law specifically enable compensation payment to the private partner in case of early termination due to:		
Public sector default or termination for reasons of public interest	✓	✓
Private sector default	✓	✓
Force majeure	✓	✓
Does the law enable the concept of economic/financial equilibrium?	✓	✓

	2016	2017
Does the law enable compensation payment to the private partner due to:		
Material adverse government action	✓	✓
Force majeure	✓	✓
Change in law	✓	✓

Note: This would mostly be based on freedom of contract and market practice.

PPP regulations (both old and new) prescribe PPP contracts to include determinations for grounds for and consequences of termination, force majeure, and mechanism for allowing variations. However, there are no standard compensation clauses as there are no model concession documents available. Also, there is still no clear, standardized system for compensating the private sector for unilateral changes by the government during or after bidding (i.e., before project reaches financial close), save for energy generation independent power producer (IPP) projects, which provisions for termination and rights for compensation (e.g., price adjustment) are regulated under the Ministry of Energy and Mineral Resources (MOEMR)-issued Regulation No. 10 of 2017 as lastly amended by MOEMR Regulation No. 10 of 2018 on principles of power purchase agreements.

In addition, for all sectors, compensation mechanism could be provided to private partners through government guarantees (see section 4.1.1.13).

4.1.1.13 Government Support

	2016	2017
Is project development fund available?	✓	✓
Land acquisition support from government		
Resettlement and/or compensation cost to residents at the project site	✓	✓
Imposed limits on time frame to complete land acquisition (day)	512 ✓	512 ✓
Is there a dedicated agency to streamline land acquisition?	✓	✓
Exemption from/reduction of land use fees	✓	✓
Viability gap fund (VGF)	✓	✓
Limits to VGF as a percentage of projects capital cost	49% ^a	49%
Government guarantees:^b		
Currency inconvertibility and transfer risk	✓	✓
Foreign exchange risk ^c	×	×
War and civil disturbance risk	✓	✓
Breach of contract risk	✓	✓

	2016	2017
Regulatory risk	✓	✓
Expropriation risk	✓	✓
Government payment obligation guarantee	✓	✓
Credit guarantees ^d	×	×
Minimum demand/revenue guarantee ^e	✓	✓
Availability-/performance-based payment contracts	✓	✓
Tax subsidies	✓	✓

Notes:

^a Viability gap fund cannot be used in conjunction with availability-based payments.

^b The following is based on the types of government guarantees commonly provided by the government.

^c Regulations are silent on the provision of foreign exchange guarantees, and Indonesia Infrastructure Guarantee Fund (IIGF) risk allocation guidelines encourage the investors to use hedging instruments, therefore marked red.

^d Regulations are silent on this type of guarantee, therefore marked red.

^e The IIGF and regulations do not explicitly state that such guarantees can be provided. But it is known that four toll road PPP projects received revenue guarantees in the past (however, three of these four projects had state-owned enterprise as a main sponsor).

Details of available government support for PPP projects in Indonesia are shown in Table 4.1.

Table 4.1: Details of Available Government Support for PPP Projects in Indonesia

Government Support Type	Comments
PDF	<p>PDF is administered by the MOF to support GCAs in preparation of final business cases and transaction advisory for PPP projects.</p> <p>In addition, the Committee for Acceleration of Priority Infrastructure Delivery has a mandate to prepare outline business cases for infrastructure priority projects (including PPPs), and the MOF-owned IIGF carries out project preparation studies for PPP projects that require government guarantees.</p> <p>All or part of the project preparation cost could be imposed onto the winning bidder.</p>
Land acquisition and resettlement	<p>The National Land Agency is assigned to coordinate land acquisition process, compensation, and other issues.</p> <p>LMAN was established in 2015 by the MOF to facilitate the financing of land for infrastructure projects. It is expected that LMAN will speed up the overall land acquisition process. LMAN has a flexible budgeting system which allows them to use the budget any time, without any obligation to return the unused budget to the MOF.</p> <p>The Land Revolving Fund managed by the Ministry of Public Works and Housing is a dedicated facility to support land acquisition for toll road PPP projects where the Government of Indonesia provides bridging finance for the private sector.</p>
VGF	<p>VGF can be allocated as a cash contribution to a part (not dominant) of the construction cost at the construction stage of well-prepared PPP projects (which are economically feasible but not financially viable) under the approval of the MOF.</p>

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Table 4.1 *continued*

Government Support Type	Comments
Government guarantees	<p>Could be provided through PT Penjamin Infrastruktur Indonesia, also known as the IIGF. The IIGF provides guarantees for obligations of GCAs under contractual agreements to mitigate risks stemming from the government's actions and inaction:</p> <ul style="list-style-type: none"> • breach of contract, • delays in obtaining permits and/or licences, • changes in the law, • failure of tariff adjustment, • failure of network/facility integration, and • GCA's obligation in contractually agreed revenue payments. <p>For IPP projects undertaken under Law No. 30 of 2009 (the Electricity Law) (not under a PPP framework), the MOF may issue a BVGL. It is addressed to the project companies and covers the risk of nonpayment and/or termination of the agreement. The BVGL may be granted for the period from preconstruction to construction and/or part or all of the operation period. The BVGL should be construed as a form of support undertaking. It is a mechanism to ensure that the MOF funds PT Perusahaan Listrik Negara (PLN) so that PLN can fulfill its payment obligations to the IPP. In the event of nonpayment and/or termination, the project company is required to submit the claim for the benefit of BVGL through PLN. Although project companies do not have direct recourse to the MOF under the BVGL, under the Indonesian Civil Code, the MOF support letter likely creates a primary legal obligation on the MOF to procure performance by PLN. If the MOF fails to do so, it may be liable for payment of damages to the project company.</p> <p>The BVGL is not automatically granted to project companies and, therefore, projects wishing to benefit from the guarantee are subject to an application process. The BVGL will be issued after signing of the power purchase agreement. MOF Regulation No. 130/PMK.08/2016 requires geothermal projects benefiting from the BVGL must achieve financial close within 48 months from the date of issue of the BVGL.</p>
Availability-/performance-based payment mechanism	<p>Availability-/performance-based payment methods have been introduced in the latest PPP regulation (Presidential Regulation 38 of 2015) as a potential source of investment return, in addition to traditional user-paid mechanism. This can now be applicable for sectors other than power generation or bulk water supply.</p>

BVGL = business viability guarantee letter, GCA = government contracting agency, IIGF = Indonesia Infrastructure Guarantee Fund, IPP = independent power producer, LMAN = State Assets Management Agency, MOF = Ministry of Finance, PDF = project development fund, PLN = Perusahaan Listrik Negara (State Electricity Company), PPP = public-private partnership, VGF = viability gap fund.

Source: Mott MacDonald.

PPP projects that received government support	1990–2016	1990–2017	In 2017
Viability gap fund	1	1	1
Government guarantees	31	34	3
Availability-/performance-based payment basis	64	71	7

Exhaustive data regarding PPP projects that received government support in the form of land acquisition and viability gap fund (VGF) have not been available; however, it is known that Java 7 coal-fired power plant PPP received land acquisition support, while Umbulan Water Supply PPP received VGF assistance. The number of the PPP projects undertaken on availability/performance payment basis entirely refer to energy IPP projects. However, it is noteworthy that three availability payment contracts were signed in the ICT sector in 2016 for the Palapa Ring broadband PPP projects for Western, Central, and Eastern Indonesia, which became the first projects using availability payment scheme introduced under 2015 PPP regulations.

4.1.1.14 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Power purchase agreement	✓	✓
Capacity take-or-pay contract	x	x
Fuel supply agreement	x	x
Transmission and use of system agreement	no data	no data
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	✓ ^a	✓

Note:

^a The FIDIC (International Federation of Consulting Engineers) suite of contracts is regularly used for large infrastructure procurement projects.

4.1.2 Institutional Capacity for Implementation

4.1.2.1 Institutional Setup

	2016	2017
Is there a specialized government agency (or agencies) established for PPP purposes (e.g., PPP Unit)?	✓	✓
What role does this PPP unit have?		
Guidance to and coordination between other government agencies	✓	✓
Supporting (e.g., PPP project preparation, appointment of advisers, running PDF)	✓	✓
Appraisal of PPP project feasibility studies	x	x

	2016	2017
Approval of PPP project	x	x
Procurement	x	x
Managing, monitoring, and enforcing ongoing PPP contracts	x	x

In February 2017, the Government of Indonesia established a Joint Office of PPP to coordinate the PPP activities of several ministries and government agencies.

The joint office has the following objectives:

- to act as a knowledge center for PPP in Indonesia;
- to support the government contracting authorities for the planning, preparation, and implementation of their PPP projects; and
- to provide PPP capacity-building support to these authorities.

Details of PPP promoting institutions in Indonesia are shown in Table 4.2.

Table 4.2: PPP-Promoting Institutions in Indonesia

Institution	Role in Promoting PPP
PPP Unit of the Directorate for PPP Development under BAPPENAS	Project screening and/or prioritization, provision of guidance, and dissemination of information; publication of a PPP book presenting information to prospective investors on national PPP projects in the pipeline.
Committee for Acceleration of Priority Infrastructure Delivery (KPPIP)	<p>Coordinating unit in decision-making processes to speed up settlement of issues arising from lack of effective coordination between the various government stakeholders. KPPIP acts to facilitate coordination in debottlenecking efforts for national strategic projects and priority projects. Determines funding scheme and sources for priority projects.</p> <p>Chaired by the Coordinating Ministry of Economic Affairs, with members comprising BAPPENAS, the MOF, the head of the National Land Agency, and other sectoral ministries.</p> <p>Has a central role in monitoring, coordinating, and speeding up the deliveries of strategic and priority PPP projects, sometimes commissioning or amending the prefeasibility studies to prepare them for the market.</p> <p>In charge of formulating strategies and policies for infrastructure development projects that are deemed to be particularly important for capacity enhancement of GCAs, setting quality standards of prefeasibility studies (outline business cases) and evaluation procedure, and other facilitative roles in the implementation of PPP projects.</p>

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Table 4.2 continued

Institution	Role in Promoting PPP
PPP Unit under the MOF	Set up as a champion in PPP project preparation and can procure advisors directly or can assign other government agencies, for example, PT Sarana Multi Infrastruktur (PT SMI). Coordination of preparation of final business case and transaction advisory. Assessing and approving the necessity for government support (tax incentives, viability gap funding, or guarantees) for PPP projects.
PT PII	MOF-owned institution providing guarantees for obligations of GCAs under contractual agreements to mitigate risks stemming from the government's actions and inaction for PPP projects.
PT SMI	MOF-owned institution acting as a government's infrastructure bank providing project financing (senior, mezzanine, and equity) for PPP projects, as well as providing advisory services to help GCAs in project preparation activities, such as prefeasibility studies, market sounding, bidding process, or contract settlement.
National Procurement Agency	Regulator of procurement procedure for PPP projects.
Investment Coordination Board	Marketing of the PPP projects to foreign investors. Provides a centralized licensing point for certain sectors.

BAPPENAS = Badan Perencanaan dan Pembangunan Nasional (National Development Planning Agency),
GCA = government contracting agency, MOF = Ministry of Finance, PPP = public-private partnership,
SMI = Sarana Multi Infrastruktur (State-Owned Infrastructure Financing Company).

Source: Mott MacDonald.

4.1.2.2 Project Planning

	2016	2017
Is there a PPP project pipeline developed and available?	✓	✓
Is preliminary selection of PPP projects consistent with public investment prioritization? ^a	✗	✗
Is there screening/identification methodology to identify a list of potential PPP projects from public investment priority projects?	✓	✓

Note:

^a Promoted but not institutionalized, therefore yellow and ✗.

Identification of PPP projects can be initiated by government or private entities. Multi-criteria analysis is being promoted to evaluate potential projects, which include factors such as technical and economic rationale, demand sustainability, support from stakeholders (through public consultation), compliance with laws and regulations, conformity with the national development plan, spatial plan, value for money, potential revenues, and project financing scheme. However, this multi-criteria analysis is not institutionalized and no detailed

methodology is available for GCAs to follow. BAPPENAS could provide ad hoc assistance to GCAs in screening and assessment of project-level readiness and benefits for society in accordance with the national development plan. The final outcome is issued in the form of a PPP book presenting information to prospective investors on national PPP projects in the pipeline and project status.

4.1.2.3 Project Preparation

	2016	2017
Number of project appraisal stages^a	2	5
What feasibility analyses are required for the project to be approved as a PPP?		
Technical feasibility	✓	✓
Financial feasibility	✓	✓
Legal feasibility	✓	✓
Environmental and social sustainability	✓	✓
Value for money assessment	✓	✓
Fiscal affordability assessment	✓	✓
PPP structuring and risk allocation	✓	✓
Initial market testing	✓	✓
Number of approvals to be obtained by public sector to get final go-ahead to commence PPP project procurement	no data	no data
Is the approval from the Ministry of Finance or equivalent required before commencement of procurement?	✓	✓
Is it a normal practice to appoint independent, international, and qualified advisors to assist the government with project preparation?	✓	✓

Note:

^a Number of project appraisal stages refers to the number of different levels of project preparation required before PPP project can go to the procurement stage, for example, outline business case and final business case, prefeasibility study and feasibility study.

Approval from the MOF is only required for PPP projects that are regulated under Presidential Regulation No. 38 of 2015 and

- for projects that need government support (VGF or/and guarantees);
- for projects that are submitted to MOF PPP Unit to carry out project preparation through PDF; and
- for projects implemented under different frameworks (e.g., for energy IPPs or toll road PPPs), which do not require MOF approval.

Generally, prefeasibility-level studies (outline business case) by GCA have not been prepared in line with international best practices, but, gradually, the Committee for Acceleration of Priority Infrastructure Delivery (KPPIP) is addressing this for the strategic and priority projects employing international advisors to revisit the studies. Furthermore, for feasibility-level studies (final business case) and transaction advisory, the MOF normally appoints international advisors (therefore, ✓ is marked against this indicator, but yellow in the table above).

4.1.2.4 Risk Allocation

	2016	2017
Preferred risk allocation matrix as reference	✓	✓

The Indonesia Infrastructure Guarantee Fund (IIGF) publishes and periodically updates “Risk Allocation Guidelines” illustrating basic risk allocation between GCAs and business entities in each sector/structure as a reference to guarantee proposals from the GCAs. The risk allocation is suggested in the feasibility study/final business case and is to be negotiated and concluded on a case-by-case basis in the project contract.

4.1.2.5 Procurement

	2016	2017
Is competitive bidding the only method for PPP partner selection?	✗	✗
In case of competitive tender:		
Is prequalification required?	✓	✓
Minimum time allowed to submit prequalification/expressions of interest (day)	none	none
Minimum time allowed to submit a bid:	none	none
Domestic bidding (day)		
International bidding (day)		
Is negotiation available?	✓	✓
Is there any process allowing unsuccessful bidders to challenge the award/submit a complaint?	✓	✓
If yes, maximum time allowed to submit a complaint starting from announcement of preferred bidder ^a	5	5
Maximum time limit from bid closing date until selection of preferred bidder	none	none
Maximum time limit from selection of preferred bidder until signing the contract	none	none
Transparency. Which of the following is published?		

	2016	2017
Procurement notice	✓	✓
Q&A during bid clarification stage	✓	✓
Evaluation results to bidders	✓	✓
Award notice	✓	✓
Contract	✗	✗
Confidentiality^b	✗	✗

Notes:

^a In practice, may vary depending on the nature of the project.

^b Regulations silent on GCA's obligation to bidders in relation to confidentiality.

LKPP Regulation 19 of 2015 provides that direct appointment of the PPP company is possible if certain special conditions are met:

- The project has already been built/operated by the same company.
- The project requires new technology and only one company holds this technology.
- The company controls majority of all land required to implement the project.

The features of the competitive procurement process for PPP projects regulated under Presidential Regulation No. 38 of 2015 and LKPP Regulation 19 of 2015 are presented in Table 4.3.

Table 4.3: PPP Procurement Process in Indonesia

Theme	Description
Responsible agency	Line ministries, such as the Minister of Transportation, Minister of Public Works and Housing, Minister of Telecommunication, head of government agency, or Head of regional government are the authorities who have been delegated by laws and regulations to act as the GCA in procuring business entity for PPP in accordance with their relevant sector. However, state-owned enterprise/return on equity may act as GCA to the extent stipulated under the sectoral law (e.g., PT Perusahaan Listrik Negara (Persero) for electricity).
Project announcement	The procurement notice is published online on the responsible agency website as well as on the website of the Ministry of National Development Planning (www.pkps.bappenas.go.id).
Prequalification invitation documentation	<ul style="list-style-type: none"> • Background information and brief description of the project • Objective of the project • Scope of works of the PPP project • Important information related to the PPP project • Qualification requirement for the bidders • Description of qualification process, including schedule, evaluation criteria, and method; items that disqualify bidders; format of qualification forms

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Table 4.3 continued

Theme	Description
Prequalification evaluation criteria	<ul style="list-style-type: none"> • Compliance with all regulations to conduct business • Experience and capability to finance and to implement the project • If the bidder is consortium, then <ul style="list-style-type: none"> – experience and capability in PPP projects (at least by one of the consortium members); and – experience and financing capacity will be evaluated as aggregate for consortium. • Compliance with tax obligation • Not in the state of bankruptcy • Not having any conflict of interest • For foreign business entity, all the documents issued abroad must be certified/validated by the issuing authority and validated by the Indonesian embassy • For consortium, the consortium must have consortium agreement
Prequalification evaluation method	<p>The qualification evaluation is conducted using elimination method based on bidder's compliance to the prequalification requirement. The procurement committee will only eliminate bidders if they are substantially incompliant to the prequalification requirement. The procurement committee cannot eliminate bidders that are incompliant to unsubstantial prequalification administrative requirement, and the bidders can fulfill the time requirement as stated in the prequalification document. The evaluation process will include the checking on the completeness and compliance to the prequalification requirement, and confirm and clarify that the information provided is true.</p>
Shortlist	Direct appointment possible if only one company is prequalified
RFP documentation	<p>The RFP should include the following:</p> <ul style="list-style-type: none"> • general project description; • instruction to bidders; • rules on opening and evaluation of proposal document; • restriction on corruption, collusion, nepotism, fraud, and conflict of interest; • performance and technical specification requirement; • risk allocation matrix; • payment mechanisms; • financial models, including sources of funding; • fulfillment of requirements related to aspects of legal, social, environment, guarantees, and guarantees requirements; • insurance and insurance requirement; • other documentation that is considered necessary by the procurement committee to be included and specified in the RFP; • annexes that consist of <ul style="list-style-type: none"> – information memorandum; – draft cooperation agreement; and – main requirement of Guarantee Letter (if government guarantee is required); and • other documents required.
Methods of interactions with the bidders	<ul style="list-style-type: none"> • Prequalified bidders will be provided access to a data room after submitting nondisclosure agreement. • Question and answers in writing. • Pre-bid conferences. • Face-to-face meetings (clarification meeting).

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Table 4.3 *continued*

Theme	Description
Evaluation of technical proposals	<ul style="list-style-type: none"> • There are two methods of evaluation of a bid proposal: <ul style="list-style-type: none"> – One-stage evaluation is used when the PPP project has a clear specification and does not require any further discussion for technical optimization to achieve optimal technical solution. – Two-stage evaluation is used when the technical specification of the project is not clearly defined because of the various technologies and innovations, and it requires optimization of the technical proposal. In this method, Stage 1 involves evaluation of the submitted administration and technical proposal—where qualified bidders will be then invited to discuss the technical optimization. Stage 2 will involve the evaluation of the submission of optimized technical proposal and financial proposal. • On both methods, the technical proposal is evaluated using the technical threshold. Bidders who score less than the threshold will be eliminated.
Evaluation of financial proposals	<ul style="list-style-type: none"> • At the one-stage evaluation, the financial proposal can be evaluated based on <ul style="list-style-type: none"> – value of rate of investment return, – scoring system, – lowest value of VGF, and – combination of above. • At the two-stage evaluation, the financial proposal can be evaluated based on highest economic value (combination of technical and financial value) and lowest value of VGF.
Investor selection	
Contract negotiation	Preferred bidder is invited for negotiations.
Contract signing	<ul style="list-style-type: none"> • Winning bidders must establish a business entity which will sign the PPP agreement. • PPP agreement signing by GCA and winning bidder, which will be effective after preliminary requirements stipulated in the agreement are obtained by all parties. • Within a maximum of 12 months after the PPP agreement is signed, the implementing business entity must sign a financing agreement. An extension of 6 months may be given in some cases.

GCA = government contracting agency, PPP = public–private partnership, RFP = request for proposal, VGF = viability gap fund.

Sources: Government Goods and Services Procurement Policy (LKPP) Regulation No. 19 of 2015 concerning Procurement Procedure for Partnership between Government and Business Entities for Procurement of Infrastructure. kppip.go.id; Regulation of the President of the Republic of Indonesia Number 38 of 2015 concerning Cooperation between the Government and Business Entities in the Provision of Infrastructure. [http://kpsrb.bappenas.go.id/data/fileregulasi/PPP%20REGULATION%20\(ENGLISH%20version\).pdf](http://kpsrb.bappenas.go.id/data/fileregulasi/PPP%20REGULATION%20(ENGLISH%20version).pdf).

4.1.3 PPP Market Maturity

	1990– 2016	1990– 2017	In 2017
Cumulative PPP projects that reached financial close	115	122	7
PPP projects currently in preparation	n/a	n/a	14
PPP projects currently in procurement	n/a	n/a	8

Note: It should be noted that the research relied primarily on information reported in public sources which may not be accurate or contain all the required information. Furthermore, generally, limited information is disclosed to the public in relation to project failures. Therefore, reported numbers of projects in this table may not be exhaustive. Furthermore, it is noted that information regarding thermal power generation projects in the pipeline is not available.

4.1.4 Financial Facilities

	1990– 2016	1990– 2017	In 2017
Cumulative PPP projects with foreign lending participation	28	33	5
Cumulative PPP projects that received export credit agency/ international financing institution financing	28	34	6

	2016 ^a	2017 ^b
Availability of nonrecourse/limited recourse hard currency loan	✓	✓
Maximum tenor (year)	15–20 years	15–20 years
Up-front arrangement fee	100–300 bps	100–450 bps
Floor rate (reference rate)	LIBOR	LIBOR
Margin rate	100–500 bps	300–500 bps
Political risk cover premium	Provided by IIGF	Provided by IIGF
Availability of nonrecourse/limited recourse local currency loan	✓	✓
Maximum tenor (year)	15–20 years	15–20 years
Up-front arrangement fee	100–150 bps	100–150 bps
Floor rate (reference rate)	JIBOR	JIBOR

	2016 ^a	2017 ^b
Margin rate	500-700 bps	500-600 bps
Availability of interest rate swaps	✓	✓
Forward duration of interest rate swap (year)	<5 years	<5 years
Availability of currency swaps	✓	✓
Forward duration of currency rate swap (year)	<1 year	<1 year
Project financing through project bond issuance	✗	✓
Percentage of project bonds out of total debt for project financing	n/a	<30%
Availability of project financing from local public sector banks	✓	✓
Maximum tenor for loan from local public sector banks (year)	Up to 20 years	Up to 20 years
Percentage of foreign debt out of total debt for project financing	>50%	>50%
Typical D:E ratio	75:25	75:25
Timeline to financial close	6-12 months	6-12 months
Minimum DSCR covenant levels	1.2x-1.5x	1.2x-1.5x

bps = basis points, D = debt, DSCR = debt-service coverage ratio, E = equity, IIGF = Indonesia Infrastructure Guarantee Fund, JIBOR = Jakarta Interbank Offered Rate published by Bank Indonesia.

^a Sample size = 6 PPP projects

^b Sample size = 5 PPP projects

ECAs, foreign banks backing foreign investors, and multilateral agencies dominate the project financing market in Indonesia. Domestic banks mainly focus on commercial loans. The involvement of export credit agencies is required as historically local suppliers have been unable to provide large equipment for projects.³

Table 4.4 shows the most active banks (in the past 24 months) for project finance in Indonesia.

³ Getting the Deal Through. 2017. *Indonesia*. September.

Table 4.4: Active Banks for Project Finance in Indonesia

Bank	Total Project Financing (\$ million)	Transactions
Japan Bank for International Cooperation	6,004	6
Sumitomo Mitsui Banking Corporation	1,435	14
China Development Bank	1,300	1
Mitsubishi UFJ Financial Group	1,259	9
Mizuho Bank	1,080	8

Source: Infraction Deals (information extracted on 8 March 2018).

A midterm economic development plan released by the Government of Indonesia in 2015 named infrastructure improvement as one of the top priorities to be realized by 2019. However, chronic tax revenue shortfalls have prevented the government from spending more on public works projects—Indonesian laws require that the fiscal deficit be kept below 3% gross domestic product (GDP)—thus leading to project delays.⁴ The current government has been looking to provide the much-needed boost to infrastructure and plans to implement hundreds of infrastructure projects, worth Rp5,500 trillion (\$423 billion) in total, before 2019. Furthermore, the government is looking to improve PPP regulations and expanding access to financing, including starting a new infrastructure guarantee agency, the IIGF. However, the progress has been slow, and the capability of the government to achieve these targets is under scrutiny from local and international investors.

4.2 Roads

4.2.1 Regulatory Framework

4.2.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects^a	100%	100%

Note:

^a This refers to toll road.

⁴ *Nikkei Asian Review*. 27 April 2017. Widodo's Support Erodes as Economy Sags, Infrastructure Projects Stall. <https://asia.nikkei.com/magazine/20170427/Politics-Economy/Widodo-s-support-erodes-as-economy-sags-infrastructure-projects-stall>.

4.2.1.2 Government Contracting Agency

The Indonesia Toll Road Authority (BPJT) under the Ministry of Public Works is a state authority that is competent to enter into a PPP contract.

4.2.1.3 Sector-Specific Regulations

	2016	2017
Does the private partner have the legal right to change users?	✓	✓

The key sector regulations are

- Law No. 38 of 2004 on Roads;
- Government Regulation No. 15 of 2005, as lastly amended by Government Regulation No. 30 of 2017, on Toll Roads;
- Ministry of Public Works Regulation No. 01/PRT/M/2017 on Guidelines for Procurement of Toll Road Concession; and
- Ministry of Public Works Regulation No. 16/PRT/M/2014 on Minimum Service Standard Requirements for Toll Roads.

The technical requirements for toll road construction and operation typically follow minimum Indonesian standard requirements and also some international standards, such as American Association of State Highway and Transportation Officials, and California Department of Transportation, as agreed with BPJT.

4.2.1.4 Sector Regulators

The Ministry of Public Works and the Indonesia Toll Road Authority are the main regulators for toll road concessions.

4.2.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✗	✗
Performance-based operation and maintenance contract	✗	✗
Engineering procurement and construction contract	✓	✓

4.2.2 Institutional Capacity for Implementation

4.2.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The Third National Medium-Term Development Plan 2015–2019 estimates investment needs in road infrastructure to be \$55 billion, of which around \$15 billion is expected to come from the private sector. Table 4.5 lists the pipeline of PPP projects in the road sector (sourced from the latest edition of BAPPENAS PPP book and from the KPPIP website). However, this list might not be exhaustive as BPJT might separately plan toll road PPP projects.

Table 4.5: PPP Pipeline of Road Projects in Indonesia

No.	Project Name	Length (km)	Value (\$ million)
1	Manado–Bitung Toll Road, Sulawesi	38	380
2	Balikpapan–Samarinda Toll Road, East Kalimantan	94	740
3	Serang–Panimbang Toll Road, East Java	84	808
4	Sukabumi–Ciranjang Toll Road, West Java	15	103
5	The 2nd Jakarta–Cikampek Toll Road, West Java	62	834
6	Tanjung Priok Access Toll Road, West Java	23	281
7	Jogyakarta–Solo Toll Road, Central Java	45	113
8	Jogyakarta–Bawen Toll Road, Central Java	72	270
9	Semarang–Demak	25	564
10	Semanan–Balaraja	32	753
11	Kamal–Teluknaga–Rajeg	39	1,200

BAPPENAS = Badan Perencanaan dan Pembangunan Nasional (National Development Planning Agency), BPJT = Badan Pengatur Jalan Tol (Toll Road Regulatory Agency), km = kilometer, KPPIP = Committee for Acceleration of Prioritized Infrastructure Development, PPP = public–private partnership.

Sources: BAPPENAS. 2016. *Public Private Partnerships, Infrastructure Projects Plan in Indonesia—PPP Book 2017*; KPPIP, <https://kppip.go.id/> (accessed 18 February 2017). BPJT, <http://bpjt.pu.go.id/konten/progress/dalam-persiapan-tender> (accessed 27 February 2018).

4.2.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	8

4.2.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	2	2	-
Unsolicited bids	1	1	-
Competitive bidding process	5	5	-
PPP projects currently in procurement	n/a	n/a	3

Currently, three toll road projects are under procurement: Probolinggo–Banyuwangi toll road (173 kilometers [km]), Jakarta–Cikampek 2 Selatan (64 km), and Serang–Panimbang (34 km).

4.2.3 Features of Past PPP Projects

4.2.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	28	-	-
PPP projects that reached financial close (\$ million)	5,405	-	-

Around 50% of the projects were brownfield type (rehabilitate–operate–transfer) and were completed in the 1990s. Starting from 2004, when the Law No. 38 of 2004 on Roads removed the monopoly over development and operation of toll roads and regulatory function from state-owned company PT Jasa Marga, the awarded projects were typically build–operate–transfer (BOT) concessions; however, about a third of the project involved PT Jasa Marga (Persero) as a sponsor.

4.2.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	3	3	-
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	11%	11%	-

4.2.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	-
Government guarantees:	4	4	-
Minimum traffic/revenue guarantees	4	4	-
Availability-/performance-based payment basis	-	-	-

No information has been available on the number of road PPP projects (that reached financial close) which received government support in the form of land acquisition and VGF. It is known that land revolving fund (\$489 million of government commitment) managed by the Ministry of Public Works and Housing is a dedicated facility to support land acquisition for toll road PPP projects.

4.2.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	28	28	-
Government-paid contracts	-	-	-
		2016	2017
What additional revenue streams are allowed?			
Land use development rights		✓	✓
Advertising		✓	✓

Presidential Regulation No. 38 of 2015 introduced the possibility of performance-based payment mechanism for the toll road PPP sector.

4.2.3.5 Tariffs

Toll road tariffs are controlled by the Minister of Public Works and Public Housing, with BPJT having the authority to recommend the initial fare and subsequent toll tariff adjustments to the minister. Regulations stipulate that the tariff will be reviewed every 2 years.

Both open and closed toll road operations are practiced in Indonesia, with differing tariff structures for six groups of vehicles enumerated below:

- Group I: small car, pick-up/small truck, and passenger bus
- Group II: truck with two axles
- Group III: truck with three axles
- Group IV: truck with four axles
- Group V: truck with five axles and truck trailer
- Group VI: motorcycle

Examples of current toll rates are detailed in Tables 4.6 and 4.7.

Table 4.6: Examples of Current Toll Rates on Roads with Open Toll System in Indonesia (Rp per trip)

Toll Road	Group I	Group II	Group III	Group IV	Group V	Group VI
Jakarta Intra Urban Toll Road (2017)	9,500	11,000	14,500	18,000	23,000	-
Jakarta Outer Ring Road W2 (2014)	9,500	11,500	15,000	17,000	20,500	
Palembang - Indralaya	6,000	8,500	11,500	14,500	17,500	
Ngurah Rai-Nusa Dua-Benoa (2017)	11,500	17,500	23,500	29,000	35,000	4,500
Bogor Ring Road (2016)	5,500	8,500	11,000	14,000	16,500	
Suramadu (2016)	15,000	22,500	30,000	37,500	45,000	

Source: Indonesia Toll Road Authority. <http://bpjt.pu.go.id/> (accessed 27 February 2018).

**Table 4.7: Examples of Current Toll Rates Effective from 2015
on Roads with Closed Toll System in Indonesia**
(Rp per kilometer)

Toll Road	Length (km)	Group I	Group II	Group III	Group IV	Group V	Group VI
Jakarta– Bogor	59	Rp145	Rp190	Rp255	Rp322	Rp382	n/a
Purwakarta– Cileunyi	123	Rp375	Rp570	Rp740	Rp930	Rp1,190	n/a
Jakarta– Cikampek	83	Rp165	Rp260	Rp285	Rp355	Rp455	n/a

km = kilometer.

Source: Indonesia Toll Road Authority, <http://bpjt.pu.go.id/> (accessed 13 February 2017).

4.2.3.6 Risk Allocation

Typical risk allocation arrangements in road PPP contracts (concession type) are shown in Table 4.8.

**Table 4.8: Typical Risk Allocation Arrangements in Road PPP Contracts
in Indonesia (Concessions)**

Risk	Private	Public	Shared	Comment
Traffic risk	✓			
Collection risk	✓			
Tariff risk		✓		
Competition risk		✓		
Government payment risk				There have not been any performance-based payment road PPP contracts yet
Environmental and social risk			✓	
Land acquisition risk		✓		
Permits	✓			
Geotechnical risk	✓			
Brownfield risk: inventories studies, property boundaries, project scope	✓			

continued on next page

Table 4.8 *continued*

Risk	Private	Public	Shared	Comment
Political risk		✓		
Force majeure			✓	
Foreign exchange risk	✓			

PPP = public-private partnership.

Sources: Mott MacDonald; IIGF. 2017. *Risk Allocation Guideline*. <http://www.iigf.co.id/media/kcfinder/docs/risk-allocation-guideline-2017-tanpa-sambutan.pdf>.

4.2.4 Local Capabilities

State-owned road developer PT Jasa Marga has demonstrated a limited capacity for new road project development. Private players have entered the market but are yet to make a substantial contribution to the market.

Indonesian state-owned contractors and Indonesian private contractors have a demonstrated competency for basic road design and construction. Top-tier firms have demonstrated competency for construction of elevated/viaduct road construction.

Bridge construction typically would require international contractor experience.

4.2.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	1	1	–
PPP projects that received export credit agency/international financing institution support	–	–	–

Toll roads in Indonesia were mostly financed by domestic state banks with majority of financing being capital injections to state-owned enterprises (SOEs) or corporate financing for toll road constructions.

4.2.6 Challenges

In 2011, the BPJT awarded the Ngawi-Kertosono segment, comprising around 50 km, and the Solo Ngawi segment, comprising around 40 km, of the Trans-Java toll road to the local subsidiary of the Australian contractor Theiss Pty Limited. The project ran into difficulties primarily due to BPJT not fulfilling its public sector obligations to secure land required for the project. On 31 March 2015, the group entered into an agreement to sell 100% of its shares in PT Solo Ngawi Jaya and Pt Ngawi Kertosono Jaya. Completion of the sale agreements was subject to relevant regulatory approvals. BPJT has transferred the projects to the SOE, Jasa Marga.

In the 1990s, two projects were terminated: Jakarta Outer Ring Road (S and E1 sections) and Jakarta Outer Ring Road (E2, E3, and N sections).

Challenges of PPP progress in the road sector are provided in Table 4.9.

Table 4.9: Challenges of PPP Progress in the Road Sector in Indonesia

Challenges	Currently Implemented Tackling Measures
Difficulty to finance toll road PPP projects as lenders are reluctant to accept traffic risk	Introduction of availability-/performance-based payment mechanism in sectors other than power and water under Presidential Regulation No. 38 of 2015.
Land acquisition delays	Over the last 5 years, the government introduced a series of laws aimed to speed up land acquisition process, but implementation of these measures in practice is yet to be proved. Land revolving fund (\$489 million of government commitment) managed by the Ministry of Public Works and Housing is a dedicated facility to support land acquisition for toll road PPP projects.

PPP = public-private partnership.

Source: Mott MacDonald.

4.3 Railways

4.3.1 Regulatory Framework

4.3.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	49%	49%

4.3.1.2 Government Contracting Agency

The Ministry of Transportation (MOT), head of government agency, or head of regional government, as well as state-owned or regional-owned enterprises could act as GCA.

4.3.1.3 Sector-Specific Regulations

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

The key sector regulations are

- Law No. 23 of 2007 on Railway;
- Government Regulation No. 56 of 2009 as amended by Government Regulation No. 6 of 2017 on Railway Service; and
- Government Regulation No. 72 of 2009, as amended by Government Regulation No. 61 of 2016 on Traffic and Rail Transportation.

4.3.1.4 Sector Regulators

Details of railways sector regulatory agencies in Indonesia are shown in Table 4.10.

Table 4.10: Railways Sector Regulatory Agencies in Indonesia

Agency	Function
Ministry of Transportation	Grants approvals on alignment; sets design criteria, technical specifications, and permits
PLN	Provides power supply
Ministry of Communication	Issues the approval of radio frequency band

PLN = Perusahaan Listrik Negara (State Electricity Company).

Source: Mott MacDonald.

4.3.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	×	×
Performance-based operation and maintenance contract	×	×
Engineering procurement and construction contract	✓	✓

4.3.2 Institutional Capacity for Implementation

4.3.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The Third National Medium-Term Development Plan 2015–2019 estimates investment needs in railway infrastructure to be \$17 billion, with around half of it expected to come from the private sector.

PPP pipeline of railway projects is listed in Table 4.11.

Table 4.11: PPP Pipeline of Railway Projects in Indonesia

No.	Project Name	Length (km)	Value (\$ million)	Lead Agency
1	Batam Island Railway, Riau Islands	43	635	Batam Indonesia Free Zone Authority
2	Urban Railway City of Medan, North Sumatera	no data	477	Local Development Planning Agency, City of Medan

BAPPENAS = Badan Perencanaan dan Pembangunan Nasional (National Development Planning Agency), KPPIP = Committee for Acceleration of Priority Infrastructure Delivery, km = kilometer, PPP = public-private partnership.

Sources: BAPPENAS. 2016. *Public Private Partnerships, Infrastructure Projects Plan in Indonesia—PPP Book 2017*; IJ Global Database. <http://www.ijglobal.com> (accessed 18 February 2017); KPPIP. <https://kppip.go.id/> (accessed 18 February 2017).

4.3.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	1

4.3.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	–	–	–

	1990– 2016	1990– 2017	In 2017
Unsolicited bids	-	-	-
Competitive bidding process	1	1	-
PPP projects currently in procurement	n/a	n/a	n/a

4.3.3 Features of Past PPP Projects

As of the end of 2016, there were no railway PPP projects in Indonesia.

In 2016, the Government of Indonesia awarded a 50-year concession for the \$5.1 billion Jakarta–Bandung high-speed rail line to the joint venture between Indonesian SOEs and the China Railway International Group; however, the project has not yet reached financial close.

4.3.4 Local Capabilities

Indonesia's railways PPP market is still at an embryonic stage of development, with an absence of significant weakness of local capabilities in many key areas:

- Transaction preparation and structuring would require import of international expertise.
- Railways ridership assessments, design, and planning relies on international expertise.
- Rolling stock and systems would require import of goods and international expertise.
- Railways system integration would require import of international expertise.
- Indonesian SOE contractors and Indonesian private contractors with experience in road design and construction are currently adapting that experience in collaboration with international contractors in the current railway sector construction work packages.
- O&M management under a PPP would require import of international expertise.
- Export credit and international expertise would be required in project financing.

4.3.5 Challenges

The Soekarno–Hatta International Airport rail link PPP has been proposed as a priority project but failed to be tendered to market because of haltering project development. Key challenges have included lack of investment into developing a reliable ridership (demand) assessment and land availability for proposed alignment. The project has been eventually handed over to an SOE.

For the Jakarta–Bandung high-speed rail line awarded in 2016, the consortium was seeking land development rights along the alignment to cross-subsidize the project. However, to date, key permits have not been granted, which has prompted the project lenders to ask for a government guarantee for the project; however, the request was rejected by the Indonesian government.

Challenges of PPP progress in the railway sector are shown in Table 4.12.

Table 4.12: Challenges of PPP Progress in the Railway Sector in Indonesia

Challenges	Currently Implemented Tackling Measures
Land acquisition delays, especially in urban areas of high density.	Over the last 5 years, the government introduced a series of laws aimed to speed up land acquisition process, but implementation of these measures in practice is yet to be proved.
There has been insufficient investment to date in assessing potential ridership for proposed rail projects. Additionally, there has been insufficient development of “stepping-stone” intermediate-technology projects such as bus networks for developing ridership along potential alignments.	
Additionally, project conceptualization to date has given insufficient attention to feeder systems to bring passengers from origination to station/from station to final destination.	
Private bus travel offers very competitive fares, while cost-recovery-plus oriented railway tariffs would likely be substantially more expensive. Therefore, a strong value proposition (safety, reliability, availability, among others) or heavy cross-subsidy would be needed to encourage passengers to have modal shift toward the railways.	
First-of-a-kind risks: The low level of modern railways experience in Indonesia will present many first-of-a-kind risks, especially around finding or importing know-how and systems.	

PPP = public-private partnership.

Source: Mott MacDonald.

4.4 Ports

4.4.1 Regulatory Framework

4.4.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	49%	49%

Presidential Regulations 44 of 2016 allowed 49% ownership of marine cargo terminal within PPP schemes during the concession period. This includes the supply of piers, buildings, container terminals, bulk terminals, and roll-on/roll-off terminals. Also, special permit for higher thresholds could be granted by the MOT.

4.4.1.2 Government Contracting Agency

For PPP projects in the Indonesian ports sector, the GCA is generally the relevant port authority represented by the MOT. In addition, new PPP regulation officially allowed an SOE to act as GCA. For the ports sector, these are Indonesian port corporations (IPCs), named PT Pelabuhan Indonesia (Pelindo) I, II, III, and IV.

4.4.1.3 Sector-Specific Regulations

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

The ports sector in Indonesia is largely regulated under Law No. 17 of 2008 on Shipping (the Shipping Law or Navigation Act). Prior to the Shipping Law, all the major commercial ports in Indonesia were controlled by the four state-owned IPCs. The IPCs acted as both the sole operator and port authority, and had regulatory authority over private sector ports. The law removed the state-sector monopoly on ports and encourages participation by the private sector. The law made a clear separation between the regulator and the operator—reducing the role of the IPCs to that of a port operator.

Other relevant regulations in the ports sector are as follows:

- Government Regulation No. 20 of 2010 on Inland Waterways Transport;
- Government Regulation No. 61 of 2009 as amended by Government Regulation No. 64 of 2015 on Harbours;
- MOT Regulation No. 62 of 2010 as amended by MOT Regulation No. 130 of 2015 on Organization and Working Procedure of the Port Authority Unit;
- MOT Regulation No. 95 of 2015 on Guidelines to Determine the Port Service Charge by the Port Business Entity;
- Government Regulation No. 20 of 2010 as amended by Government Regulation No. 22 of 2011 on Coastal Seas Transportation;
- Government Regulation No. 21 of 2010 on Maritime Environmental Protection;
- MOT Regulation No. 51 of 2015 as amended by MOT Regulation No. 146 of 2016 on Sea Port Service (as partly revoked by MOT Regulation No. 24 of 2017);
- MOT Regulation No. 15 of 2015 as amended by MOT Regulation No. 166 of 2015 on Concession and Other Cooperation Forms between the Government and the Port Business Entity in the Field of Harbours;
- Ministry of Transport Decree Number KP 901 of 2016 on National Port Master Plan; and
- Government Regulation No. 15 of 2016 concerning Type and Tariff of Non-Tax Revenue Applicable to the MOT.

4.4.1.4 Sector Regulators

There is still some uncertainty as to what power and control the IPCs still have within the ports sector. Most regulatory authority at the port level resides with the newly formed port authority although the government largely regulates port tariffs to ensure fair opportunities for competition.

Pursuant to Article 1, Paragraph (26) of the Navigation Act, the port authority shall mean a government agency at a port as the authority performing regulatory, controlling, and supervisory functions on port activities carried out on a commercial basis. Thus, under a PPP scheme, the MOT can become the port authority, i.e., the party performing regulatory arrangement, control, and supervision of port activities administered under the PPP.

In general, all ports in Indonesia must have the following regulatory authorities: port authority, port administration unit, and harbor master.

Details of ports sector regulatory agencies in Indonesia are shown in Table 4.13.

Table 4.13: Ports Sector Regulatory Agencies in Indonesia

Agency	Function
Port authority	Providing onshore and offshore land for the port Providing and maintaining anchor, port pool, cruise line, and road arrangement Providing and maintaining aids to navigation Ensuring safety and order in the port Ensuring and maintaining the sustainability of the port environment Preparing the port masterplan comprising the port working area and port interest area Suggesting a rate to be determined by the Ministry of Transportation, for the use of water or land, and port facilities provided by the government as well as port services convened by the port authorities in accordance with the prevailing laws and regulations Ensuring smooth distribution of goods
Port administration unit	Responsible for ports that are not yet commercially operated
Harbor master	Responsible for the safety and security of the port, including implementation, supervision, and law enforcement Responsible for the search and rescue around in vicinity of the port

Source: Mott MacDonald.

4.4.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	×	×
Performance-based operation and maintenance contract	×	×
Engineering procurement and construction contract	✓	✓

4.4.2 Institutional Capacity for Implementation

4.4.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

MOT Decree No. KP 901 of 2016 calls for the development of a National Port Master Plan. The National Port Master Plan shall provide a framework for planning Indonesia's port system with a 20-year planning horizon. In 2016, BAPPENAS issued a PPP book to provide information to potential investors on available PPP infrastructure investments in Indonesia. The PPP book 2017 lists five major port projects under preparation.

PPP pipeline of maritime projects is provided in Table 4.14.

Table 4.14: PPP Pipeline of Maritime Projects in Indonesia

No.	Project Name	Location	Value (\$ million)
1	Development of Patimban Deep Sea Port ^a	West Java	3,090
2	Expansion of Kabil Port (Tanjung Sauh Terminal)	Batam	806
3	Development of Bitung International Hub Port	North Sulawesi	500
4	Development of new Makassar New Port	South Sulawesi	422
5	Cikarang–Bekasi–Laut Inland Waterways ^b	Java	255
6	Tanah Ampo Cruise Terminal	Bali	36

BAPPENAS = Badan Perencanaan dan Pembangunan Nasional (National Development Planning Agency), KPPIP = Committee for Acceleration of Priority Infrastructure Delivery, PPP = public-private partnership.

^a Funding scheme not yet determined—potential for PPP.

^b Footnote a.

Sources: BAPPENAS. 2016. *Public Private Partnerships, Infrastructure Projects Plan in Indonesia—PPP Book 2017*; KPPIP. <https://kppip.go.id/> (accessed 18 February 2017); IJGlobal. <https://ijglobal.com/data/transaction/28950/tanah-ampo-cruise-terminal-ppp> (accessed 22 February 2018)

The Kuala Tanjung International Hub Port project was planned to be developed under a PPP scheme in 2016. However, in 2017, the Government of Indonesia appointed PT. Pelindo I as the owner of the Kuala Tanjung Port. The first phase of the port will be operated by an SOE called PT. Prima Multi Terminal, which is a consortium of several SOEs (Pelindo I, PT. PP, and PT. Waskita Karya), where Pelindo I owns the majority of the shares (55%). It is worth noting that this project is listed in the latest official PPP book 2017. Although unlikely, it is possible that part of the hub port development might involve PPP funding.

4.4.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	6

4.4.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	1	1	-
Unsolicited bids	-	-	-
Competitive bidding process	1	1	no data
PPP projects currently in procurement	n/a	n/a	-

4.4.3 Features of Past PPP Projects

4.4.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	9	9	-
PPP projects that reached financial close (\$ million)	3,429	3,429	-

Although there has been private involvement in Indonesia for single user ports, especially in the mining and energy sectors, private sector involvement in Indonesian public ports has been limited due to the dominance of state-owned port operators, Pelindo I, II, III, and IV. Historically, public port projects in Indonesia have been assigned directly to Pelindos. Subsequently, state-owned port

operators would enter into a joint venture with private company to finance, construct, and operate certain port facilities and equipment under business-to-business arrangements.

One of the notable examples of significant private sector involvement is the operation of Jakarta International Container Terminal (JICT) by a joint venture between Hutchison Port Holdings and Pelindo II, where Hutchison Port Holdings holds majority stake. Similarly, the recent joint venture between Mitsui and Pelindo II to develop and operate a greenfield container terminal in Tanjung Priok Port gives another precedent. This is further expansion of Mitsui's operation in Tanjung Priok, following its acquisition of Portek in 2011, which is the company that operates container Terminal 009 in Tanjung Priok.

4.4.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	6	6	-
PPP projects with foreign sponsor participation (as a share to the total number of ports PPP projects)	67%	67%	n/a

4.4.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	-	-	-
Government guarantees:	-	-	-
Minimum traffic/revenue guarantees	-	-	-
Availability-/performance-based payment basis	n/a	n/a	n/a

4.4.3.4 Payments Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	9	9	-
Government-paid contracts	-	-	-

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	x	x
Wharf charge	✓	✓
Navigation charge	✓	✓
Pilotage charge	✓	✓
Channel access charge	✓	✓

In a landlord port model, the landlord typically receives revenue streams from wharf charges, navigation charges, pilotage charges, and channel access charges. It is feasible, if port infrastructure (such as channels, wharves, and land backing) is developed and financed by a private sector partner, and landlord dues could be collected by the private sector. There are no existing examples in Indonesia where the private sector has landlord rights, although this is the model currently envisaged for the new Kuala Tanjung International Hub Port.

4.4.3.5 Concession Fees

	2016	2017
What are the typical mechanisms for fee paid to the government?		
Lump sum	no data	no data
Royalties	no data	no data
Revenue share	✓	✓
Profit share	no data	no data
Annual lease	no data	no data

In 2015, Pelindo I, III, and IV signed concession agreements with the government for the commercial operations of 89 existing ports. Subsequently, the three port operators must deposit a minimum concession fee of 2.5% per year from the gross income of each port to the government, as the owner of the ports. Since, historically, private sector involvement has been through joint venture with one of the Pelindos, the concession fee mechanism is likely to be passed down to the private sector partner.

4.4.3.6 Tariffs

	2016	2017
Does private sector have the freedom to set the tariff?	✓	✓

Currently, Indonesia is implementing a common model of port administration known as a “Landlord Port.” The government owns, provides, and regulates access to port land, port waters, as well as basic port infrastructure, while port operators provide port services for a long duration in the form of a concession agreement. The newly established port authorities and private terminal operators can establish commercial rates for port services that are market related. The government will oversee the rates to ensure port operators behave competitively. Guidelines for stipulating port tariffs are specified under MOT regulation PM No. 95 of 2015. Tariffs for services performed by the port authorities are determined by the port authorities themselves after consulting with the MOT. The relevant port authority collects the tariffs.

Terminal handling charges (THCs) are charges made by the terminal operators with respect to cargo movement/stevedoring services performed at a terminal. For container terminals, THCs cover the movement of a container between the ship’s hold to the exit–entry gate via the container terminal yard.

Actual THCs vary from port to port, as the charges are part of a full negotiated package with the government. The JICT and the Koja Container Terminal at Tanjung Priok Port reportedly opposed recent increases in container handling charges. Foreign shipping companies had previously implemented a \$95 THC per twenty-foot equivalent unit (TEU), and a charge of \$135 per forty-foot equivalent unit (FEU). This sum comprised \$70 payable to the port operator and \$25 in surcharge. Now, the port operator’s share has risen to \$83 per TEU and \$124 per FEU, which has prompted international shipping companies to increase their surcharge to compensate for the increased box handling charge, as shown below.

Typical terminal handling charge is shown in Table 4.15.

Table 4.15: Typical Terminal Handling Charge in Indonesia

Designation	Company	Year	Terminal Handling Charge (\$)	
			Twenty-foot equivalent unit	Forty-foot equivalent unit
Shipping Line	Hapag-Lloyd	2017	95	145
Shipping Line	MOL	2016	95	145
Shipping Line	CNC LINE	2015	123	154

CNC = Cheng Lie Navigation Company, MOL = Mitsui O.S.K. Lines.

Source: Mott MacDonald.

4.4.3.7 Labor

	2016	2017
How is the issue of excess and efficiency of labor force typically being resolved?		
Private operator given the freedom to hire and fire and to set its own terms and conditions of employment	no data	no data

	2016	2017
The pre-PPP workforce is transferred to the private operator. The private operator is allowed to make gradual changes to the terms and conditions of employment, providing these are no worse than before and/or are acceptable to the unions or workers' representatives.	no data	no data
The port authority or the government undertakes a major labor force restructuring in advance of the PPP, and the workforce is transferred to the private operator.	no data	no data

Limited information on historical labor force arrangements is available. However, all scenarios above are feasible and would depend on the nature of the specific agreement.

4.4.3.8 Risk Allocation

Typical risk allocation arrangements in port PPP contracts are provided in Table 4.16.

Table 4.16: Typical Risk Allocation Arrangements in Port PPP Contracts in Indonesia

Risk	Private	Public	Shared	Comment
Demand risk	✓			Market practice in the ports sector that private party bears this risk.
Competition risk (exclusivity)		✓		
Tariff implementation or escalation risk			✓	In case of extreme fluctuation of inflation and interest rate, the risk can be shared with the public sector.
Environmental and social risk			✓	Environmental permits required in preparing project to be public responsibility. Private takes responsibility for obtaining environmental and social permits and obligations on signing the PPP agreement.
Permits			✓	Permits required in preparing project are public responsibility. Construction and operations permits are private responsibility.
Geotechnical risk	✓			The private sector is typically responsible for designs to assess and address site-specific condition risks, including geotechnical surveys.

PPP = public-private partnership.

Source: Mott MacDonald.

4.4.4 Local Capabilities

The Indonesia ports sector consists of a hierarchy system of approximately 2,400 ports. Indonesia has 111 commercial ports, of which 25 are deemed “strategic ports.” Approximately 50% of the ports are classified as special terminals/dedicated private terminals serving the mining, oil and gas, power, forestry, fishery tourism, and shipyard industry. Major ports in Indonesia, such as JICT, are normally operated by international companies. There is a large domestic stevedoring capacity with almost 90% of Indonesia’s external trade transported via sea. The market for marine civil works in Indonesia is large with experienced local and international contractors working on local and international projects.

The logistics infrastructure supporting ports in Indonesia is significantly behind that of neighboring countries like Malaysia and Singapore, which reduces efficiency and adds to supply chain costs. There is a need for the logistics capability in Indonesia to drastically improve in order to raise port capability to international standards.

4.4.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	2	2	-
PPP projects that received export credit agency/international financing institution support	1	1	-

4.4.6 Challenges

Challenges of PPP progress in the ports sector are given in Table 4.17.

Table 4.17: Challenges of PPP Progress in the Ports Sector in Indonesia

Challenges	Currently Implemented Tackling Measures
<p>Historic dominance of state-owned enterprises (Pelindos) in port development and operation, resulting in significant influence and power of Pelindos that creates uncertainty in the potential investors.</p> <p>Although Shipping Law 2008 calls for an independent port authority, its enforcement still needs improving. There is a lack of clarity on Pelindos’ roles as regulator or operator in cases where they are in a joint venture with a foreign operator. One example would be the extension of the Hutchison Port Holdings concession contract for the</p>	<p>The MOT promotes port competition and competitive tendering process.</p>

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Table 4.17 *continued*

Challenges	Currently Implemented Tackling Measures
Jakarta International Container Terminal by Pelindo II, which raised questions regarding Pelindo's role with the MOT. The ministry actually opposed the extension as it claimed that it was not consulted.	
Poor planning of supporting landside logistics infrastructure for potential port PPP projects undermines bankability of the projects.	This is a recognized shortcoming, and the government is simultaneously prioritizing road and rail upgrades (also through PPPs) to increase supply chain capacity and efficiency.

MOT = Ministry of Transportation, PPP = public-private partnership.

Source: Mott MacDonald.

4.5 Airports

4.5.1 Regulatory Framework

4.5.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	49%	49%

Specific ownership restrictions have been set for aviation as a national strategic asset or utility.

4.5.1.2 Government Contracting Agency

PT Angkasa Pura I and PT Angkasa Pura II manage and operate all 26 major airports in Indonesia. Both organizations are limited liability state-owned companies (or "Persero") and are regulated by the Directorate General of Civil Aviation (DGCA), which is part of the MOT. The government contracting entity would, therefore, most likely be the DGCA or another body of the MOT, or PT Angkasa Pura I or II themselves as per 2015 PPP regulation, which officially allowed an SOE to act as a GCA.

4.5.1.3 Sector-Specific Regulations

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

The Association of Southeast Asian Nations (ASEAN) Single Aviation Market aims to liberalize the air transport market in each ASEAN member state to boost the region's connectivity and competitiveness as well as reduce air fares. The single market allows ASEAN-based carriers to carry passengers and cargo from and to any third country to an ASEAN member state. This requires each state to fully open up their international airports to other ASEAN members and eliminate restrictions on the frequency and maximum capacity of flights. However, there are some member states who are in objection to certain provisions in this agreement.

Key sector regulations include

- Aviation Act No.1 of 2009, and
- Government Regulations No. 40 of 2012 on Airport Construction and Environmental Preservation.

The International Civil Aviation Organization publishes a number of regulations that airport operators are required to adopt in order to ensure safe and secure air transport operations. This includes Annex 14, which sets out the physical requirements for any type of civil airport in order for it to receive an operating license from the national Civil Aviation Authority. This also includes Annex 17, which deals with various security measures to safeguard the aviation industry against acts of unlawful interference. The MOT and the Civil Aviation Authorities are responsible for implementing and monitoring compliance with these regulations.

4.5.1.4 Sector Regulators

Details of airport sector regulatory agencies in Indonesia are provided in Table 4.18.

Table 4.18: Airport Sector Regulatory Agencies in Indonesia

Agency	Function
The Directorate General of Civil Aviation (DGCA) under the Ministry of Transportation	Main regulator of airports and aviation in Indonesia. It is responsible for developing and implementing policies as well as norms, standards, procedures, and criteria on the use of airspace, aircraft, and airports; the organization of air transport and air navigation; and enhanced safety, security, and environmental quality. The DGCA also acts as airport authority in terms of supervising aviation activities at airports, including the regulation of airport services and operations. In addition, the DGCA is responsible for certification and licensing of air transportation, airports, flight security, air navigation, aircraft airworthiness, and operations.
AirNav Indonesia	National air traffic control provider, and its main business includes the provision of Air Traffic Services, Aeronautical Telecommunications, dissemination of Aeronautical Information, as well as Search and Rescue Information and Aviation Meteorology Information.
AVSEC Airport Security	Formed by PT Angkasa Pura (as the only airport operator), it provides security services and meets international and national rules with regard to the provision of security services at airport.

Source: Mott MacDonald.

4.5.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	✓	✓

4.5.2 Institutional Capacity for Implementation

4.5.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The key challenge that PT Angkasa Pura I and II face is to ensure that airport infrastructure is developed in line with the strong growth in air transport demand in all parts of the country. The total number of passengers in Indonesia was around 100 million in 2015, and the trade body International Air Transport Association predicts this to more than double by 2035, to over 240 million annual passengers. Consequently, a number of airports have already run out of capacity and are in urgent need of expansion, and it is anticipated that the majority of PT Angkasa Pura I and II airports will need upgrading in the near future.

BAPPENAS 2015 PPP book identified 12 projects which are planned to be implemented as PPPs; however, in the latest edition of the PPP book (2017), all these projects have been removed. While the initial list indicated the ambition of Indonesia to implement large airport projects as PPPs, in reality, the government faces significant difficulty in progressing with these projects due to the factors outlined in the previous section on key challenges. One example is Yogyakarta Airport, which was meant to be implemented as a PPP, but then PT Angkasa Pura had to obtain bond financing in order to get the project underway.

PPP pipeline of airport projects is listed in Table 4.19.

Table 4.19: PPP Pipeline of Airport Projects in Indonesia

No.	Project Name	Value (\$ million)
1	Development of New Bali Airport	510
2	Development of New Yogyakarta Airport	500
3	Expansion of Mutiara Airport, Central Sulawesi	103
4	Expansion of Komodo Airport, East Nusa Tenggara	49
5	Expansion of Radin Inten II Airport, Lampung	109
6	Expansion of Juwata Airport, North Kalimantan	103
7	Expansion of Sentani Airport, Papua	109
8	Expansion of Tjilik Riwut Airport, Central Kalimantan	109
9	Expansion of Fatmawati Soekarno Airport, Bengkulu	124
10	Expansion of Hanandjoeddin Airport, Bangka-Belitung Island	58
11	Expansion of Matahora Airport, Southeast Sulawesi	49
12	Expansion of Sultan Babullah Airport, North Maluku	100
13	Batam Airport	no data

PPP = public-private partnership.

Sources: BAPPENAS. 2016. *Public Private Partnerships, Infrastructure Projects Plan in Indonesia—PPP Book 2017*; Asian Development Bank.

4.5.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	no data

The status of preparation for the project in the pipeline is not clear.

4.5.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-

	1990– 2016	1990– 2017	In 2017
Unsolicited bids	-	-	-
Competitive bidding process	-	-	-
PPP projects currently in procurement	n/a	n/a	no data

4.5.3 Features of Past PPP Projects

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	-	-	-
PPP projects that reached financial close (\$ million)	-	-	-

There have not been any past airport PPP projects in Indonesia.

4.5.4 Local Capabilities

The operation and management of airports is split between two SOEs: PT Angkasa Pura I is responsible for operating 13 airports in Eastern Indonesia (including Bali Denpasar), while PT Angkasa Pura II operates 13 airports in Western Indonesia (including the Soekarno–Hatta International Airport, the country’s largest airport).

Tenders for construction or improvement works at the airports are usually only released to the national construction sector through the websites or separate tender notices.

There are a number of contractors and professional services companies in Indonesia who are able to design and construct passenger terminals or airports. One such example is the new Terminal 3 at Jakarta Soekarno–Hatta International Airport, a facility with an ultimate capacity of 25 million passengers per year. PT Wijaya Karya Tbk, one of Indonesia’s largest contractors, formed a consortium with Indulexco, an Indonesian professional services firm (responsible for preparing the detailed engineering design) and submitted the winning bid for the terminal design. Other examples of national contractors with airport construction experience include PT Adhi Karya and PT Brantas Abipraya.

4.5.5 Financial Facilities

Information not available.

4.5.6 Challenges

Challenges of PPP progress in the airport sector are shown in Table 4.20.

Table 4.20: Challenges of PPP Progress in the Airport Sector in Indonesia

Challenges	Currently Implemented Tackling Measures
<p>Dominance of SOEs (PT Angkasa Pura) in airport development and operation creates lack of certainty in potential investors.</p>	
<p>Access to sufficient amount of funding for upgrading existing airports or for building new airports has been another obstacle.</p> <p>One of the new airport projects was the New Yogyakarta International Airport, and in order to develop this airport, the government signed an MOU with GVK, an Indian conglomerate (which already manages commercial operations at the Bali International Airport). Despite the MOU, the project did not move forward and was then planned to be procured as a PPP. This was also not successful, which resulted in Angkasa Pura I having to sell conventional bonds to finance the land acquisition of around 58% of the required land (worth \$210 million) in order to get the project started. This illustrates the practical challenges in developing projects as PPPs in Indonesia as well as securing sufficient funding.</p>	
<p>Foreign ownership of airports is not possible in Indonesia under Law No. 1 of 2009 on Aviation, which states that foreign investors cannot own a majority stake in an Indonesian airport. While there are ways of securing some level of foreign participation for infrastructure assets where this restriction applies, for example, by forming a joint venture with the national SOE as has been implemented in the ports sector, there are no such examples in the airport sector. As airports require significant capital expenditure over a long-term period, the current lack of transparency and certainty with regard to operating in Indonesia as a foreign company as well as the fact that Angkasa Pura has full control over the country's major airports further limits the ability of Indonesia to put such partnerships into practice.</p>	
<p>Acquisition of new land for airport expansion is very slow and has significantly delayed or permanently stopped a number of airport projects.</p> <p>Examples of projects that continue to be delayed mainly due to land acquisition are the new airports in Bandung (Kertajati International Airport) and in Yogyakarta (New Yogyakarta International Airport), and upgrading and expansion of a large number of other airports such as Semarang's Achmad Yani International Airport (Central Java), Surabaya's Juanda International Airport (East Java), and Banjarmasin's Syamsudin Noor International Airport.</p>	
<p>Physical constraint to airport expansion as a number of existing airports are surrounded by urban development and can therefore cannot be expanded any further.</p>	

MOU = memorandum of understanding, PPP = public-private partnership, SOE = state-owned enterprise.

Source: Mott MacDonald.

4.6 Energy

4.6.1 Regulatory Framework

4.6.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Power generation	100%	100%
Power transmission	100%	100%
Power distribution	100%	100%
Oil and gas	75%	75%

The negative investment list (revised by Presidential Regulation No. 44 of 2016) imposes maximum limits of foreign ownership for various categories of business. Power generation projects above 10 megawatts (MW) can be 100% foreign owned over the duration of concession period provided projects use PPP scheme.

4.6.1.2 Government Contracting Agency

In general, electricity supply in Indonesia is controlled by the Government of Indonesia and is provided through Perusahaan Listrik Negara (State Electric Company) (PLN).

PLN is generally responsible for the management and development of power generation, transmission, and distribution in Indonesia. PLN controls about 70% of generating assets and is the sole owner of distribution and transmission assets of electricity in the country. Therefore, private sector participation is still limited to the power generation sector, when private companies contract with PLN to sell the generated electricity.

PLN also has the right of first refusal on all new generation capacity, is also the provider of electricity of last resort, and holds an Electricity Supply Business Permit. PLN is owned by the Government of Indonesia and is supervised from a technical perspective by the Ministry of Energy and Mineral Resources (MOEMR), and from a management perspective by the Ministry of State-Owned Enterprises and the Ministry of Finance (MOF).

4.6.1.3 Sector-Specific Regulations

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

The power sector is regulated by the MOEMR and its subagencies: the Directorate General of Electricity and the Directorate General of New and Renewable Energy and Energy Conservation.

The key sector regulations are the Electricity Law together with its implementing regulations on Electricity Supply Business (Government Regulation No. 14 of 2012 as amended by Government Regulation No. 23 of 2014) that provide a greater role for the regional governments to participate in the sector. Cross-Border Sale and Purchase (Governmental Regulation No. 42 of 2012) and Electricity Support Business (Government Regulation No. 62 of 2012) are also supporting elements to the Electricity Law. Furthermore, the guidelines on the use of domestic products in the construction of electricity infrastructure are dictated by the Ministry of Industry Regulation No. 54/M-IND/PER/3/2012 as amended by Ministry of Industry Regulation No. 05/M-IND/PER/2/2017, as it stipulates the minimum percentage of local content.

The geothermal energy sector is mainly regulated by Law No. 21 of 2014 on Geothermal and Government Regulation No. 7 of 2017 on Indirect Use of Geothermal. The tariff for renewable energy and thermal energy is under the regulation of MOEMR.

4.6.1.4 Sector Regulators

Details of energy sector regulatory agencies in Indonesia are given in Table 4.21.

Table 4.21: Energy Sector Regulatory Agencies in Indonesia

Agency	Function
Ministry of Energy and Mineral Resources	Principal actor in the governance of the energy and mining sector. It oversees policy making, implementation, and technical policy; manages energy and mining assets; and evaluates the performance of the sector. Responsible for developing the National Electricity Plan and preparing laws and regulations related to electricity and national tariff and subsidy policies.
National Energy Council	Established in 2009 as the principal energy coordination body. It brings together the seven ministries indirectly involved in the energy sector.
Ministry of Finance	Manages the state's fiscal and financial assets and properties, and formulates the state budget, taxation, customs, and excise policies. With regard to energy, the Ministry of Finance is engaged in the management of energy subsidies; the setting of renewable energy tariffs; and the taxation of energy products, energy infrastructure, and operations.
Ministry of Environment	Establishes and enforces environmental standards and regulations. It sets the environmental standards for resource extraction in the coal mining, oil, and gas sectors.

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Table 4.21 *continued*

Agency	Function
Ministry of Forestry	Grants Forest Borrow Permit to power plant developer, if plant is to be located in the forest.
Commission VII of the Indonesian House of Representatives	Principal parliamentary body dealing with energy matters. It reviews and approves the National Energy Policy as well as any change in the level of Indonesia's electricity and fuel subsidy regimes.

Sources: Mott MacDonald; www.esdm.go.id; www.den.go.id; www.kemenkeu.go.id; www.menlh.go.id and www.dpr.go.id.

4.6.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
Power purchase agreement	✓	✓
Capacity take-or-pay contract	✓	✓
Fuel supply agreement	✓	✓
Transmission and use of system agreement	×	×
Engineering procurement and construction contract	✓	✓

Unless for renewable energy, PLN does not use a standard form of power purchase agreement (PPA). The form of the PPA evolves from project to project, with most projects containing a generally similar risk allocation. The general principles of a PPA is currently set out in MOEMR Regulation No. 10 of 2017, as last amended by MOEMR Regulation No. 10 of 2018. Typical risk features of a PPA include allocations of

- natural force majeure,
- government force majeure,
- power/load requirements,
- limited transmission capability,
- fuel availability,
- land acquisition issues, and
- generator performance.

PLN will generally try to impose the relevant standard PPA form and limit changes to key commercial and bankability points. However, there is some degree of variation between individual PPAs on such key commercial and bankability points, depending on the risk profile of projects and the bargaining power of sponsors and lenders.

4.6.2 Institutional Capacity for Implementation

4.6.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

In 2007, the government established a specific legal basis for national energy management, with the adoption of Law No. 30 of 2007 on Energy (or the Energy Law). The law presents general principles for the management of energy resources and the government's basic targets for the future development of the energy mix. In particular, it laid the foundation for regulations on the development of renewable energy and energy conservation. The Energy Law mandated the National Energy Council to draft a National Energy Policy. The government adopted a revised National Energy Policy in 2014, which was signed on 17 October 2014 as Government Regulation No. 79 of 2014.

PLN procures new IPPs under a number of different strategic programs. The latest program, which covers the development of power generation in 2015–2019, was set at 35 gigawatts (GW) under the 2015–2024 Business Plan for the Provision of Electric Power (2015–2024 Rencana Usaha Penyediaan Tenaga Listrik), as approved by the MOEMR. Nearly 30 GW of new capacity has been reserved for IPPs, including coal, gas, geothermal, and hydro technologies. Around 5 GW of electricity is planned to be sourced from geothermal energy by 2025, which would require a capital investment of more than \$20 billion. Local investors are unlikely to have sufficient capital, so international support is needed.

PPP pipeline of energy projects is shown in Table 4.22.

Table 4.22: PPP Pipeline of Energy Projects 1 in Indonesia

No.	Project Name	Capacity (MW/GW)
Thermal Generation		
<i>Based on RUPTL (2015–2024)</i>		
1	Coal-fired power plants	42.1 GW
2	Gas-fired power plants	5.0 GW
3	Combined cycle power plants	9.2 GW
<i>Based on the 35 GW power development program (2015–2019)</i>		
4	Coal-fired power plants	18.1 GW

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Table 4.22 *continued*

No.	Project Name	Capacity (MW/GW)
5	Gas-fired power plants	6.6 GW
Renewable Generation		
6	Matenggeng Dam	900 megawatts
7	Geothermal energy	5.0 GW

GW = gigawatt, KPIP = Committee for Acceleration of Priority Infrastructure Delivery, PPP = public-private partnership, RUPTL = Rencana Usaha Penyediaan Tenaga Listrik.

Sources: PT PLN (Persero). 2016. *Rencana Usaha Penyediaan Tenaga Listrik 2016-2025*. <http://www.djk.esdm.go.id/pdf/RUPTL/RUPTL%20PLN%202016-2025.pdf>; KPIP. <https://kpip.go.id/> (accessed 18 February 2017).

Some of the recently announced energy projects are presented in Table 4.23.

Table 4.23: PPP Pipeline of Energy Projects 2 in Indonesia

No.	Project Name	Capacity (MW)	Value (\$ million)
1	Gunung Galunggung Geothermal	110	440
2	Gunung Hamiding Geothermal	20	80
3	Gunung Wilis Geothermal	20	80
4	Simbolon Samosir Geothermal	110	440
5	Graho Nyabu Geothermal	110	440
6	Gunung Geureudong	55	220
7	Nautilus Tidal Stream	150	750
8	Jawa 3 Combined Cycle-Gas Power Plant	800	1,600
7	Palmerah Tidal Bridge	n/a	550
8	Sipborpa Hydropower Plant	114	420

MW = megawatt, PPP = public-private partnership.

Sources: IJGlobal database (accessed 16 January 2018); Investment Catalogue 2017, Ministry of Energy and Mineral Resources Republic of Indonesia.

4.6.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	no data

4.6.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	9	9	-
Unsolicited bids	5	5	-
Competitive bidding process	6	8	2
License scheme	6	9	3
PPP projects currently in procurement	n/a	n/a	3

In general, IPP/PPP energy projects are procured through direct appointment, direct selection, or public auction. The direct selection is limited to

- mine-mouth projects;
- renewable projects;
- purchase of excess power from mine-mouth, coal, gas, and gas machine;
- situations where the local power system is in a critical condition; and
- increasing the capacity of existing power generators operating in the same location.

Under the competitive tender methods, the key bid parameter is the price at which generators are willing to sell the electricity generated. The request for proposals (RFPs) issued by PLN generally contains a draft form of PPA and other relevant project agreements such as a draft guarantee agreement (if the project is being tendered under a PPP program). Bidders are often able to make submissions on the PPA (and other drafts provided by PLN) form before submission of their bids. The winning bidder is expected to execute the PPA within 3–4 months of the date PLN confirms the winning bid in its letter of intent.

4.6.3 Features of Past PPP Projects

4.6.3.1 PPP Projects That Reached Financial Close

	1990–2016		1990–2017		In 2017	
Energy Generation	Number	\$ million	Number	\$ million	Number	\$ million
<i>Renewable energy generation:</i>	26	5,842	29	6,741	3	899
Solar	1	104	1	104	-	-

	1990–2016		1990–2017		In 2017	
Wind	-	-	1	150	2	311
Hydro	13	1,634	13	1,634	-	-
Geothermal	11	4,099	13	5,274	1	588
Waste/Biomass	1	5	1	5	-	-
<i>Thermal energy generation:</i>	36	23,284	39	28,378	3	5,094
Coal	25	22,236	28	27,330	3	5,094
Diesel	3	436	3	436	-	-
Natural gas	8	612	8	612	-	-
Total Energy Generation	62	29,127	68	35,119	6	5,993

Private sector participation is allowed through IPP arrangements.

In 2016, the first power projects implemented under a PPP framework were the Central Java coal-fired power plant with a proposed capacity of 2 × 1,000 MW under a BOT structure on Indonesia Infrastructure Guarantee Fund (IIGF) guarantee, and Java 7 coal-fired power plant PPP.

4.6.3.2 Foreign Investor Participation

	1990–2016		1990–2017		In 2017	
	Number	As a share to the total number of projects	Number	As a share to the total number of projects	Number	As a share to the total number of projects
PPP projects with foreign sponsor participation						
Renewables	21	81%	24	83%	3	100%
Thermal	19	53%	22	56%	3	100%

4.6.3.3 Government support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	no data
Government guarantees	23	25	2
Availability-/performance-based payment basis	62	68	6

Typically, developers are expected to acquire all land needed for the plant site and the interconnection lines to the grid, which could be a long-distance corridor. The latest PPP regulations (No. 38 of 2015) allow the government to procure land for certain PPP projects, including the energy sector. An example of increased government support in the electricity IPP sector is Java 7 coal-fired power plant project, which achieved financial close in 2016, when PLN acquired the land for the project in return for an equity stake in the IPP.

There are two types of government guarantee applicable to power plant projects under PPP schemes: a business viability guarantee letter (BVGL) granted by the MOF and a guarantee agreement granted by the IIGF. The BVGL covers the risk of nonpayment and/or termination of the agreement. The BVGL may be granted for the period from preconstruction to construction and/or part or all of the operation period (Norton Rose Fulbright, 2015). As for IIGF guarantees, the first and only IPP project to date to receive such guarantees has been a 2,000 MW Central Java coal IPP, which achieved financial close in 2016.

4.6.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	-	-	-
Government-paid contracts	62	68	6

For IPPs, under the terms of the PPA, the seller is obliged to make available, and PLN is obliged to purchase the net dependable capacity and the net electrical output from the plant. The seller receives revenue from PLN in the form of regular capacity payments based on declared net dependable capacity, plus payment for the net electrical output of the plant in accordance with a dispatch instruction from PLN. The plant is required for base load operation including variable operating modes as required by the dispatch center.

4.6.3.5 Tariffs

Among others, MOEMR Regulation No. 50 of 2017 and MOEMR Regulation No. 19 of 2017 regulate the benchmark purchase prices for various types of energy sources.

The feed-in tariff (FIT) varies according to the unit capacity and the heat rate as follows:

	2016	2017
Is there a system of FITs?	✓	✓

2017		
Typical FIT levels ^a	Type	Price/kWh
This FIT for wind is generally believed to be uncompetitive and under review by the MOEMR	Wind	Rp656–Rp1,004/kWh
Hydro with a capacity greater than 10 MW	Hydro	\$8–\$9/kWh
Up to 20 MW, dependent on location and whether connected to low- or medium-voltage network	Biomass	\$0.14–\$0.16 kWh X F
Between 20 MW to 50 MW, dependent on location and connected to high-voltage network	Biomass	\$0.11/kWh X F
Above 50 MW, dependent on location and connected to high-voltage network	Biomass	\$0.10/kWh X F
Up to 20 MW, dependent on location and whether connected to low- or medium-voltage network	Biogas	\$0.11–\$0.13/kWh X F
Between 20 MW to 50 MW, dependent on location and connected to high-voltage network	Biogas	\$0.91/kWh X F
Above 50 MW, dependent on location and connected to high-voltage network	Biogas	\$0.86/kWh X F
Up to 10 MW, dependent on location and whether connected to low- or medium-voltage network	Municipal solid waste (zero waste)	Rp1,450–Rp1,798/kWh
Up to 10 MW, dependent on location and whether connected to low- or medium-voltage network	Municipal solid waste (landfill gas)	Rp1,250–Rp1,598/kWh
On 3 June 2014, MOEMR Regulation No.17/2014 was issued under which the ceiling price was based on three defined regions and the planned commercial operation of the power plant dates from 2015 to 2025.	Geothermal	\$0.13–\$0.26/kWh
Under the MOEMR Regulation No.17/2013, IPPs can bid for solar photovoltaic (PV) power projects if the PV module contains 40% or more of local components.	Solar PV	\$0.25–\$0.30/kWh

2017		
MOEMR Regulation No. 19/2017	Mine-mouth coal	75% of highest local benchmark cost of supply; or 75% of national average benchmark cost of supply
	Nonmine-mouth coal	highest local benchmark cost of supply or determined through tender process through B to B

FIT = feed-in tariff, kWh = kilowatt-hour, MOEMR = Ministry of Energy and Mineral Resources, MW = megawatt.

Note:

^a It is understood that the Ministry of Energy and Mineral Resources in Indonesia, in early 2017, has issued a new ruling on a new tariff scheme for renewable energy (solar, wind, biomass, and geothermal), which will place renewable energy in competition with average cost per systems. There will also be changes in the local content. These changes are detrimental to the sector for the most part.

Source: Ministry of Energy and Mineral Resources. 2015. *Regulation No. 21/2016; Regulation No. 12/2017*. <https://www.esdm.go.id/> (accessed on 20 February 2018).

MOEMR Regulation No. 12 of 2017 on the Utilization of Renewable Energy Resources for Electricity Supply sets out the tariff framework such as for the following types of renewable energy projects: solar photovoltaic, hydro, biogas, biomass, wind, geothermal, and municipal waste-to-energy. The key principle is that the price payable by PLN from renewable energy sources should be aimed at lowering (or at the very least not increasing) the existing average cost of generation (known by its Indonesian acronym, BPP) on the relevant grid. This regulation supersedes the benchmark prices for the purchase of electricity from hydro, and supersedes any contradictory clauses in earlier regulations.

The regulation further provides that, for PPAs that have already been signed, the new pricing regulations will not apply, and the signed PPA pricing regime will remain in effect. In general, where PPAs have not been signed, but a developer has been designated by the government or PLN as the project developer through the applicable regulatory regimes, the pricing regime will follow this new regulation. Despite this, PLN and developers can elect to follow new pricing arrangements (even where the PPAs have already been signed).

For small renewable projects, the regulation provides that all renewable energy projects with a capacity below 10 MW are “must run” projects, meaning that PLN must dispatch those projects (in priority to other base load projects) if they are available to dispatch.

4.6.3.6 Risk Allocation

Typical risk allocation arrangements in energy PPP contracts are shown in Table 4.24.

Table 4.24: Typical Risk Allocation Arrangements in Energy PPP Contracts in Indonesia

Risk	Private	Public	Shared	Comment
Demand risk		✓		
Revenue collection risk		✓		
Tariff risk	✓			
Government payment risk		✓		
Environmental and social risk	✓			As projects require international finance, international environmental and social standards are to be followed. Social risks remain critical in geothermal projects.
Land acquisition risk			✓	
Permits	✓			
Handover risk	✓			
Political risk		✓		The perception of political risk on independent power producer power projects remains relatively high, due to legal and regulatory risk and breach of contract risk and thus most players desire and seek viable government support/political risk insurance cover through export credit agency.
Regulatory risk		✓		There are major concerns from the private sector on frequent changes of regulations relevant to several sectors, notably the geothermal sector.
Interconnection risk	✓			
Brownfield risk: asset condition				n/a
Grid performance risk		✓		
Hydrology risk	✓			
Exploration and drilling risk	✓			This is a major expenditure for geothermal power and therefore a significant risk.

PPP = public-private partnership.

Source: Mott MacDonald and Risk Allocation Guide: public private partnership (PPP) in Indonesia (March 2017) Indonesia Infrastructure Fund. www.iigf.co.id.

4.6.4 Local Capabilities

Local companies involved in the energy sector have varying degrees of capability and, in some cases, provide to the project feedstock experience (as owners or operators), landownership capability, and domestic finance access.

There is also an IPP Association (Asosiasi Produsen Listrik Swasta Indonesia) serving as a forum for Indonesian IPPs and is responsible for representing the interests of its 48 members, particularly in relation to issues such as renegotiation of tariffs and PPAs. At the moment, most of the association's members are companies operating coal-fired power plants; however, it is looking to expand its membership to include companies involved with other energy sources, particularly those renewable.

4.6.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	25	30	5
PPP projects that received export credit agency/international financing institution support	23	29	6

4.6.6 Challenges

A significant challenge faced by power plant projects in achieving financial close has been the difficulty in acquiring necessary land for the project, as lenders expect all land to be acquired before the financing agreement can be signed. A notable example is the 2,000 MW Central Java coal-fired IPP. The agreement with the winning bidder was signed in 2011; however, due to its inability to acquire all land because of local communal opposition on some parts of it, the project did not reach financial close until the end of 2016. The developer eventually had to declare force majeure, and by the court ruling, the Government of Indonesia forced the owners of the remaining land to clear.

Challenges of PPP progress in the energy sector are shown in Table 4.25.

Table 4.25: Challenges of PPP Progress in the Energy Sector in Indonesia

Challenges	Currently Implemented Tackling Measures
Extensive list of permits and licenses from a variety of central and regional government ministries and departments. Prolonged application and approval period associated with permits.	Considering several recent projects as precedence, there is further clarity in the permits and process required that assists developers and owners in better understanding such aspects.

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Table 4.25 *continued*

Challenges	Currently Implemented Tackling Measures
Land acquisition delays, local community objections for land acquisition.	Under PPP regulations (Presidential Regulation 38 of 2015), energy independent power producer projects (that use a PPP scheme) can qualify for government support for land procurement. Over the last 5 years, the government has introduced a series of laws aimed to speed up land acquisition process, but implementation of these measures in practice is yet to be proved.
A significant challenge for the energy distribution system due to the lack of transmission lines and supporting infrastructure. The private sector has no control over grid and transmission and distribution network, as this is a monopoly of PLN.	
The lack of experience in private financing of (long-term) renewable energy projects remains a significant challenge for renewable project development.	
Challenges specific for geothermal projects: <ul style="list-style-type: none"> community perception and social acceptance of geothermal projects can be an issue, and lack of government guarantee for geothermal field development and resource confirmation. 	
<ul style="list-style-type: none"> Frequent change of regulatory environment 	

PLN = Perusahaan Listrik Negara (State Electricity Company), PPP = public-private partnership.

Source: Mott MacDonald.

4.7 Water and Wastewater

4.7.1 Regulatory Framework

4.7.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Bulk water supply and treatment	n/a	n/a
Water distribution	n/a	n/a
Wastewater treatment	100%	100%
Wastewater collection	100%	100%

The current legal framework permits private sector provision of bulk water supply and treatment. The current legal framework does not permit private sector provision of water distribution services. Private sector provision is permitted in private estates, such as industrial estates and residential developments.

4.7.1.2 Government Contracting Agency

In general, municipal water supply services are provided by public water utility departments, or Perusahaan Daerah Air Minum (PDAMs), that are managed at the city government or provincial government level. Sewerage service coverage in Indonesia, excepting Jakarta, is negligible in most areas.

The Jakarta Provincial Government, or Daerah Khusus Ibukota (DKI), has delegated the provision of municipal water supply services to Pam Jaya, a public water utility department. Similarly, the planning and provision of municipal wastewater collection and treatment services have been delegated to Dinas Sumber Daya Air, while the operation and maintenance (O&M) of wastewater treatment facilities is delegated to the local government state-owned enterprise PD PAL. Sewerage service coverage in Jakarta is only around 2%.

4.7.1.3 Sector-Specific Regulations

	2016	2017
Can the private sector be given water abstraction rights?	✓	✓
Are there regulations in place on raw water extraction?	✓	✓
Are there regulations in place on the release of treated effluents?	✓	✓

Law No. 7 of 2004 on Water Resources provides flexibility for private sector involvement through Article 9 on commercial water rights, and Article 40 clause 4 on participation in water supply delivery. The law considered water both a social and economic good, which opened up the potential for private sector involvement. However, in March 2015, Indonesia's constitutional court ruled that water privatization was unconstitutional. This revoked the 2004 law. In 2015, the Central Jakarta District Court ordered the Jakarta government to revert its control over water resources, which is threatening to null the contracts between the administration and the private water companies. At the time of writing this report, the impact of these changes in law have not been fully defined nor have they been fully implemented and are expected to face further challenges from the private sector.

The following laws are in place for regulating raw water extraction:

- Law on Water Resources Development (Law No. 11 of 1974)
- Government Regulation No. 121 of 2015 on Water Resources Business

The following regulations are in place to regulate the drinking water supply service and provision:

- Government Regulation No.122 of 2015 on Drinking Water Supply System
- Government Regulation No. 16 of 2005 on Development of Drinking Water Supply System

The following regulations are in place for regulating wastewater effluent release:

- Ministry of Environment Regulation No. 68 of 2016 on Wastewater Effluent Standard (including various industrial wastewater effluent)
- Various governor regulation and mayor/regent regulation on wastewater effluent standard at the local government level, which should be compliant with national effluent standard or stricter than the national effluent standard both for industry and domestic.

4.7.1.4 Sector Regulators

Details of water sector regulatory agencies in Indonesia are provided in Table 4.26.

Table 4.26: Water Sector Regulatory Agencies in Indonesia

Agency	Function
Ministry of Public Works and Housing	In charge of dealing with tenders, contracts, and procurement processes, which are delegated to the directorate general that deals with the relevant sector. Define national-level water and wastewater sector policies, technical standards for both water and wastewater treatment, and technical assistance.
Directorate General of Water Resources	The main government agency that deals with the management and development of the water sector. This directorate holds the responsibility for formulating and implementing water sector policies and drinking water technical standards.
Directorate General of Human Settlements	Involved in the water and wastewater sector through two directorates (see “The Drinking Water Development Directorate” and “The Environmental and Settlement Sanitation Directorate”).
The Drinking Water Development Body for Improvement of Drinking Water Supply Implementation/Badan Peningkatan Penyelenggaraan Sistem Penyediaan Air Minum (BPPSPAM)	This body under the Ministry of Public Works holds the responsibility for formulating and implementing policies, as well as managing, monitoring, and facilitating the development of drinking water supply systems and infrastructure in Indonesia.

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Table 4.26 *continued*

Agency	Function
The Environmental and Settlement Sanitation Directorate	Holds the responsibility for formulating and implementing policies and technical standards in the wastewater and drainage sector
Research and development board	Responsible for conducting water resource-related research and development activities through its Water Resources Research and Development Centre
Ministry of Home Affairs	Management of water and wastewater utilities, drinking water tariff guidelines, financial performance assessment, and monitoring
Ministry of Health	Setting drinking water quality standards and water and wastewater quality monitoring
Ministry of Finance	Funding allocation, loan agreement, and (multilateral) management of assets
Ministry of Environment	Water pollution control and other related environmental policies
Ministry of Energy and Mineral Resources	Exploration, development, and management of groundwater sources
Local government	Management of local government-owned public water utilities
Indonesian association of water utilities	Association of Indonesian drinking water and wastewater services. Provides the means for consumers to voice their grievances toward the municipal water and wastewater service providers

Source: Mott MacDonald.

4.7.1.5 Standard Contracts

	2016	2017
What standardized contracts are available and used in the market?		
PPP/concession agreement	x	x
Bulk water supply agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	✓	✓

Most projects proposed under the national PPP program are planned as BOT structures; however, there is no standardization of contracts. Concession structures have been used for Jakarta West Water Concession, Jakarta East Water Concession, and Tangerang City Water Concession.

4.7.2 Institutional Capacity for Implementation

4.7.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

Traditionally, provincial governments have had insufficient budgets to make capital investments; therefore, capital works have generally been managed and financed through state funds through the provincial department of public works. However, state funding allocation has not kept pace with growth in demand for water utility services. Therefore, there is institutional appetite to procure water utility services through PPP.

Sector strategy and investment priorities are detailed in the National Long-Term Development Plan (RPJPN 2005–2025) and the National Medium-Term Development Plan (RPJMN 2015–2019). PPP project pipeline is detailed in the BAPPENAS PPP book, which is published every 1 to 2 years on the BAPPENAS website.

PPP pipeline of water projects is provided in Table 4.27.

Table 4.27: PPP Pipeline of Water Projects in Indonesia

No.	Project Name	Location	Capacity (m ³ /day)	Value (\$ million)
1	Pondok Gede Water Supply, Bekasi	West Java	432	32
2	Pekanbaru Water Supply	Riau	1,008	195
3	Jatiluhur–Jakarta Pipeline and Water Treatment Plant	West Java	1,296,000	600
4	Sindang Heula Water Treatment Plant	Banten, West Java	no data	17

m³/day = cubic meter per day, PPP = public–private partnership.

Sources: Mott MacDonald; BAPPENAS. 2016. *Public Private Partnerships, Infrastructure Projects Plan in Indonesia—PPP Book 2017*.

4.7.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	1

4.7.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	4	4	-
Unsolicited bids	1	1	-
Competitive bidding process	3	3	-
PPP projects currently in procurement	n/a	n/a	2

4.7.3 Features of Past PPP Projects

4.7.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	14	14	-
PPP projects that reached financial close (\$ million)	1,312	1,312	-

4.7.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	10	10	-
PPP projects with foreign sponsor participation (as a share to the total number of water PPP projects)	71%	71%	-

4.7.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	1	1	-
Government guarantees:			
Minimum traffic/revenue guarantees	2	2	-
Availability-/performance-based payment basis	no data	no data	-

The Umbulan Water Supply PPP project received both VGF and IIGF guarantees.

4.7.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	4	4	-
Government-paid contracts	10	10	-

4.7.3.5 Tariffs

In general, tariffs are set by local governments for public provision of water services through PDAM operations, and therefore, there may be different tariffs in different areas. PDAMs are generally responsible for billing and revenue collection.

In theory, the Ministry of Home Affairs regulations state that PDAMs have to charge tariffs high enough to cover their operational costs. However, in practice, more than 50% of the PDAMs have tariff structures that are too low to recover their costs. Many local governments prefer to charge low tariff rates and avoid increasing them, particularly when close to an election. However, laws are now changing, and PDAMs who enter the government's debt restructuring program are required to charge tariffs which recover the operational costs.

For water concessions, the private sector requests a contracting agency for the tariff to be increased; however, the decision is influenced at a governmental level. As an example, in Jakarta, Aetra or Palyja would request Pam Jaya to increase the tariff, and Pam Jaya would discuss with the government before a decision is made. The tariffs usually set out rates for different customer categories. Following are tariff rates for Jakarta (Table 4.28) and for Bandung (Table 4.29).

Table 4.28: Current Water Tariff in Jakarta, 2017

Volume	Water (Rp/m ³)
Up to 10 m ³	6,368
10–20 m ³	6,878
Above 20 m ³	7,511

m³ = cubic meter, Rp = rupiah.

Sources: Aetra Tangerang. 2016; Mott MacDonald.

Table 4.29: Current Water Tariff PDAM Tirtawening Kota Bandung, 2017

Volume	Water (Rp/m ³)
Up to 10 m ³	2,909
10.01–20 m ³	4,636
20.01–30 m ³	7,009
Above 30.01 m ³	9,809

m³ = cubic meter, PDAM = Perusahaan Daerah Air Minum (Public Water Utility Department), Rp = rupiah.

Source: IBNET. 2015. IBNET Database. <https://database.ib-net.org/DefaultNew.aspx>.

For the wastewater tariff, there are two options:

- If the water and wastewater are billed together, the wastewater is charged as a surcharge in the range of 25%–30% of the water tariff. This arrangement already prevails in Bandung PDAM.
- If the wastewater charge is separate, customers are billed based on the customer type (e.g., household/industry) and the floor area of the connected building.

Table 4.30: Average National Water Tariff and Production Cost in Indonesia

Tariff/Cost	Water in 2016 (Rp/m ³)	Water in 2017 (Rp/m ³)
Average national water tariff	4,581	4,698
Average national production cost	4,524	4,619

m³ = cubic meter, Rp = rupiah.

Source: Buku Kinerja PDAM 2017 (PDAM's Performance Report 2017), BPPSPAM – Ministry of Public Works.

4.7.3.6 Risk Allocation

Typical risk allocation arrangements in water concession contracts are provided in Table 4.31.

Table 4.31: Typical Risk Allocation Arrangements in Water Concession Contracts in Indonesia

Risk	Private	Public	Shared	Comment
Demand risk	✓			Both Jakarta's water concessions and the Tangerang concession place demand risk and revenue collection risk on the private sector. This has incentivized concession companies to invest where volume and value customers can be connected.
Revenue collection risk			✓	
Tariff risk			✓	While concession agreements generally have provision for index-linked tariff, this has been a major area of contention as public resistance and lack of political will has resulted in prolonged delays to tariff rebasing negotiations.
Government payment risk	✓			Generally, sits with the private sector; however, Indonesia Infrastructure Guarantee Fund has been exploring the provision of public sector guarantee against default of availability payments.
Environmental and social risk			✓	
Land acquisition risk		✓		Land acquisition is a slow and complex process in Indonesia; the private sector has no appetite to take the land acquisition risk.
Interface risk			✓	
Handover risk			✓	
Political risk			✓	
Foreign exchange risk			✓	

Source: Mott MacDonald.

Typical risk allocation arrangements in bulk water supply PPP contracts are provided in Table 4.32.

Table 4.32: Typical Risk Allocation Arrangements in Water PPP Contracts in Indonesia

Risk	Private	Public	Shared	Comment
Demand risk		✓		BOT projects have generally been conceived as bulk water supply projects, with the local PDAM being the offtaker and distributor. Consequently, revenue collection risk generally sits with the PDAM.
Revenue collection risk		✓		
Tariff risk			✓	BOT project agreements have generally been drafted with provision for index-linked tariff.
Government payment risk	✓			Generally, sits with the private sector; however, Indonesia Infrastructure Guarantee Fund has been exploring the provision of public sector guarantee against default of availability payments.
Environmental and social risk			✓	
Land acquisition risk		✓		Land acquisition is a slow and complex process in Indonesia; the private sector has no appetite to take the land acquisition risk.
Interface risk			✓	
Handover risk			✓	
Political risk			✓	
Foreign exchange risk			✓	

BOT = build–operate–transfer, PDAM = Perusahaan Daerah Air Minum (Public Water Utility Department), PPP = public–private partnership.

Source: Mott MacDonald.

4.7.4 Nonrevenue Water And Infiltration

	2016	2017
Nonrevenue water (%)	41.08	32.8
Nonrevenue water (m³/km/day)	no data	no data
Infiltration	no data	no data

m³/km/day = cubic meter per kilometer per day.

Source: Buku Kinerja PDAM 2017 (PDAM's Performance Report 2017), BPPSPAM – Ministry of Public Works.

The PDAM's performance report in 2017 indicates that the average nonrevenue water level in Indonesia is 32.80%— still below the national nonrevenue water level target of 20%.

4.7.5 Local Capabilities

Consultants

Local consultants are active on smaller projects of up to 10,000 m³/day. International consultants are active on projects financed by multilateral donors (particularly the Asian Development Bank and World Bank).

Contractors

Degremont is a well-established specialist and international engineering procurement and construction (EPC) contractor in Indonesia's water sector, with a strong track record of having built or being involved in most large-scale or complex projects. Often, plants built with bilateral funds will use contractors from the donor country sometimes with local subcontractors.

Locally financed projects are predominantly carried out by local contractors. There are more than 30 companies that carry out EPC works. The leading EPC contractors are generally state-owned, including PT Wijaya Karya (WIKA), PT Waskita Karya, and PT Nindya Karya.

Private operators

There are many leading international operators currently working in Indonesia, and many others are interested.

Equipment

Basic equipment, especially lower diameter plastic pipes or larger diameter steel pipes, can be sourced locally. Typically, specialist mechanical and electrical equipment and instrumentation and control systems are imported.

Generally, locally funded projects will procure equipment based on price, while internationally funded projects may use equipment sourced from the donor's country.

4.7.6 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	no data	no data	-
PPP projects that received export credit agency/international financing institution support	4	4	-

4.7.7 Challenges

Bandar Lampung Bulk Water Supply PPP was intended as a path-finding pilot project. The tender process failed during a consultation period prior to the formal release of tenders. Various causes have been cited, including fatal flaws in the transaction structure and lack of political willingness to provide sufficient VGF to create a bankable transaction. Currently, the government is in the process of re-tendering the Bandar Lampung Bulk Water Supply PPP, with the expectation that it can learn from previous failures.

After the Asian financial crisis of 1998, both East and West Jakarta water concessions were close to default due, in part, to payments denominated United States dollars that became untenable with the subsequent exchange rates, and the contracts were renegotiated to avoid default.

Challenges of PPP progress in the water sector are given in Table 4.33.

Table 4.33: Challenges of PPP Progress in the Water Sector in Indonesia

Challenges	Currently Implemented Tackling Measures
Poor governance and capacity issues likely to cause delays in PPP agreement.	Indonesia has an emerging PPP framework that is assigning roles and responsibilities to various public sector agencies. The procedures and approvals are still being developed in most public sector agencies and, thus, the project development pathway can be considered as untested.
Lack of centralized body to coordinate all water resource management-related issues; requires public sector project proponent and investors to manage multiple stakeholders.	
Natural challenges: lack of raw water resources. Rainfall patterns and population densities result in areas with very limited water resource.	The lack of sewerage and wastewater treatment is the most significant contributor to degraded surface water resources. Over abstraction of ground water is leading to falling water tables, ground subsidence, and degraded aquifers.

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Table 4.33 *continued*

Challenges	Currently Implemented Tackling Measures
Allocation of responsibility for the “the last mile.” There is reluctance among some private sector players to take responsibility for the construction of the “last mile” customer connections and for persuading potential customers to connect from groundwater or existing supplies to new supplies.	There are examples of good practice in Indonesia of tackling this, and documenting these case studies can increase confidence in this obligation.
Water tariff: Many PDAMs in Indonesia are struggling to have their full cost-recovery because of the low tariff, and it is very difficult to increase tariff since it requires the approval from local parliament. Only 30% of PDAMs in Indonesia are already able to implement a full cost-recovery tariff.	

PDAM = Perusahaan Daerah Air Minum (Public Water Utility Department), PPP = public–private partnership.

Source: Mott MacDonald.

4.8 Information and Communication Technology

4.8.1 Regulatory Framework

4.8.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Fixed line infrastructure	67%	67%
Fixed line services	67%	67%
Wireless/mobile infrastructure	67%	67%
Wireless/mobile services	67%	67%

4.8.1.2 Government Contracting Agency

Ministry of Communication and Informatics.

4.8.1.3 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✗	✗
Performance-based operation and maintenance contract	✗	✗
Engineering procurement and construction contract	✓	✓

4.8.2 Institutional Capacity for Implementation

4.8.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The Third National Medium-Term Development Plan 2015–2019 estimates investment needs in information and communication technology (ICT) as \$21 billion, of which around \$17 billion is expected to come from the private sector. However, the latest PPP book (2017) identifies only one project.

PPP pipeline of ICT projects is shown in Table 4.34.

Table 4.34: PPP Pipeline of ICT Projects in Indonesia

No.	Project Name	Responsible Agency	Value (\$ million)
1	Government Multi-Function Satellite	Ministry of Communication and Information	318

ICT = information and communication technology, PPP = public-private partnership.

Source: BAPPENAS. 2016. *Public Private Partnerships, Infrastructure Projects Plan in Indonesia—PPP Book 2017*.

4.8.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

4.8.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	no data	no data	no data
Unsolicited bids	-	-	-
Competitive bidding process	3	4	1
License scheme	1	-	-
PPP projects currently in procurement	n/a	n/a	n/a

The information on the type of procurement used for past projects has only been available for a limited number of projects.

4.8.3 Features of Past PPP Projects

4.8.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	2	3	1
PPP projects that reached financial close (\$ million)	589	204	385

4.8.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	-	-	-
PPP projects with foreign sponsor participation (as a share to the total number of ICT PPP projects)	n/a	n/a	-

4.8.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	no data
Government guarantees	2	3	1
Availability-/performance-based payment basis	2	3	1

Three contracts were signed in 2016 for the Palapa Ring broadband PPP projects for Western, Central, and Eastern Indonesia. Palapa Ring has become the first project in the telecommunication sector to use availability payment scheme introduced under 2015 PPP regulations. It also received guarantees from IIGF.

4.8.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	-	-	-
Government-paid contracts	2	3	1

4.8.4 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	no data	-	-
PPP projects that received export credit agency/international financing institution support	-	-	-

4.8.5 Challenges

Challenges of PPP progress in the ICT sector are shown in Table 4.35.

Table 4.35: Challenges of PPP Progress in the ICT Sector in Indonesia

Challenges	Currently Implemented Tackling Measures
Poor governance and capacity issues likely to cause delays in PPP agreement.	Indonesia has an emerging PPP framework that is assigning roles and responsibilities to various public sector agencies. The procedures and approvals are still being developed in most public sector agencies, and thus the project development pathway can be considered as untested.

ICT = information and communication technology, PPP = public-private partnership.

Source: Mott MacDonald.

4.9 Social Infrastructure

4.9.1 Regulatory Framework

4.9.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects:		
Construction of healthcare facilities	67%	67%
Services, including hospital management, specialist hospital/clinic, mental hospital, dental clinic, and laboratory and medical checkup services	67%	67%
Private maternity hospital, clinic general medical services/public hospital/public medical clinic, residential health services, and basic healthcare services facility	0%	0%
Construction of education facilities	67%	67%
Nonformal education services (vocational training, computer education, and language education)	67%	67%
Formal education services	with license	with license
Government buildings	67%	67%
Prisons and correction centers	100%	100%
Social housing	100%	100%

4.9.1.2 Government Contracting Agency

Various agencies, including relevant ministries, head of government agency, head of regional government, and state-owned or regional-owned enterprises could act as GCAs.

4.9.1.3 Sector-Specific Regulations

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

According to Law No. 20 of 2003 regarding National Education System and its implementation regulations, special license is required to provide formal education services (primary, secondary, and tertiary education).

4.9.1.4 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	×	×
Performance-based operation and maintenance contract	×	×
Engineering procurement and construction contract	✓	✓

4.9.2 Institutional Capacity for Implementation

4.9.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	no data	✓
Is there a PPP project pipeline developed and available?	✓	✓

PPP pipeline of social infrastructure projects is shown in Table 4.36.

Table 4.36: PPP Pipeline of Social Infrastructure Projects in Indonesia

No.	Project Name	Responsible Agency	Value (\$ million)
1	Nusa Kambangan Correctional Institution, Central Java	Directorate General of Correctional Facility under the Ministry of Law and Human Rights	51.5
2	Sport Facility, Papua	Agency of Youth and Sport Papua Province under the governor of the Papua Province	39
3	Sam Ratulangi Teaching Hospital, North Sulawesi	University of Sam Ratulangi under the Ministry of Research, Technology and Higher Education	28
4	Pringadi Hospital Medan, North Sumatera	Mayor of Medan	no data
5	University of Udayana Teaching Hospital	University of Udayana under the Ministry of Research, Technology and Higher Education	no data
5	Dharmais Cancer Hospital	No data	no data
6	Polytechnic Batam Education Facility	Ministry of Research, Technology and Higher Education	no data
7	Bandung Street Lighting, West Java	Regional Road Offices under the mayor of Bandung	157
8	Surakarta Street Lighting	Regional Road Offices under the Mayor of Surakarta	no data

PPP = public–private partnership.

Sources: BAPPENAS. 2016. *Public Private Partnerships, Infrastructure Projects Plan in Indonesia—PPP Book 2017*; Indonesia Investment Forum: Investment Opportunities in Indonesia 2017 – 2018, BAPPENAS, September 2017.

4.9.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	4

4.9.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	-	-	-
Competitive bidding process	-	-	-
PPP projects currently in procurement	n/a	n/a	no data

4.9.3 Features of Past PPP Projects

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	-	-	-
PPP projects that reached financial close (\$ million)	-	-	-

There have not been any past PPP projects in social infrastructure in Indonesia.

4.9.4 Challenges

Challenges of PPP progress in the social infrastructure sector are shown in Table 4.37.

Table 4.37: Challenges of PPP Progress in the Social Infrastructure Sector in Indonesia

Challenges	Currently Implemented Tackling Measures
Untested sector in Indonesia for private sector involvement	Indonesia Infrastructure Guarantee Fund is currently launching an advisory framework to provide project preparation support for social infrastructure PPP projects.

PPP = public-private partnership.

Source: Mott MacDonald.

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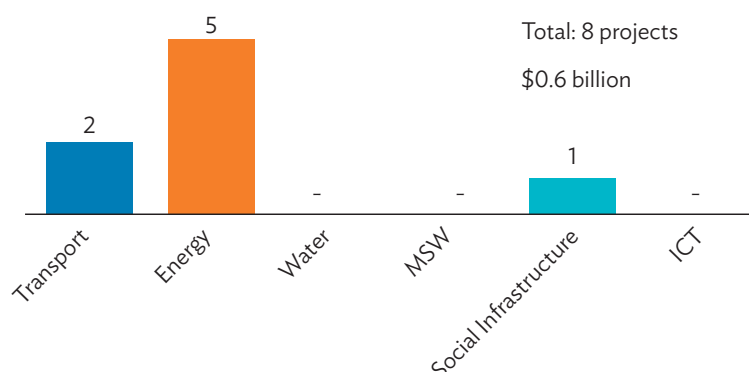
5. KAZAKHSTAN

The first public–private partnership (PPP)-related law in Kazakhstan¹ was the concession law, which was adopted in 2006 and covered build–transfer–operate projects.

Amendments to this law in 2013 broadened its scope in terms of the types of projects covered. In 2015, the PPP law was introduced and is now applicable along with the concession law to enable a much wider range of PPP-type projects. Another improvement resulting from the adoption of the PPP law is that it specifically includes a range of provisions to mitigate private sector risks and requires more comprehensive project preparation and procurement processes.

From an institutional perspective, Kazakhstan benefits from the Kazakhstan PPP center, which undertakes research and reviews PPP projects, and the Kazakhstan Project Preparation Fund, which aims to promote infrastructure development through the provision of project development funding and services on structuring and support of infrastructure projects.

Figure 5.1: PPP Projects in Kazakhstan that Have Reached Financial Close, 1990–2017

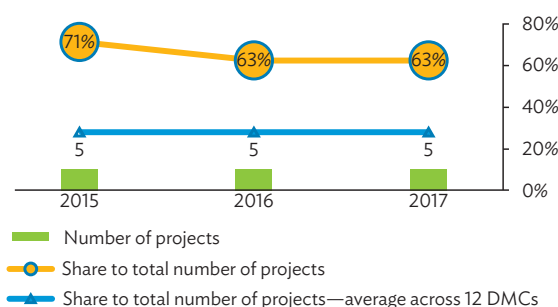


ICT = information and communication technology, MSW = municipal solid waste, PPP = public–private partnership.

Sources: IJGlobal. IJGlobal Project Finance and Infrastructure Journal. <http://www.ijglobal.com>; World Bank Group. 2015. World Bank Asia Pacific Private Participation in Infrastructure (PPI) Database. <http://ppi.worldbank.org/> (accessed 22 January 2018); KZPPP, Kazakhstan—PPP Centre Projects. 2017. PPP Projects in Kazakhstan. <http://kzppp.kz/en/%d0%b3%d1%87%d0%bf-%d0%bf%d1%80%d0%be%d0%b5%d0%ba%d1%82%d1%8b-%d0%b2-%d0%ba%d0%b0%d0%b7%d0%b0%d1%85%d1%81%d1%82%d0%b0%d0%bd%d0%b5>.

¹ The PPP Monitor is envisaged to be a dynamic product and comments for improving data quality are welcome and can be incorporated in future editions. It should also be noted that the report is using standardized definitions which may not match a particular developing member country's definitions. For the meaning of each indicator, please refer to the Appendix.

Figure 5.2: PPP Projects in Kazakhstan with Foreign Sponsor Participation, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Figure 5.3: Share of PPP Projects in Kazakhstan with Foreign Sponsor Participation by Sector, 1990–2017

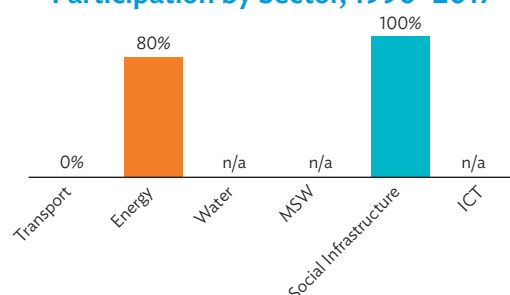
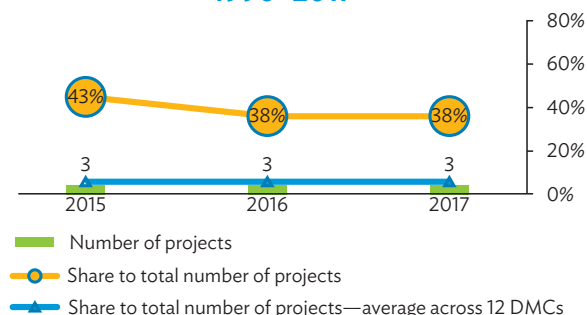


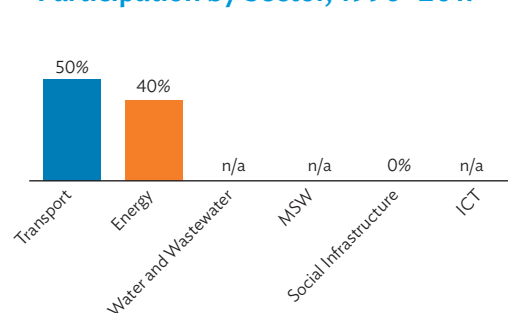
Figure 5.4: PPP Projects in Kazakhstan with Foreign Lender Participation, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

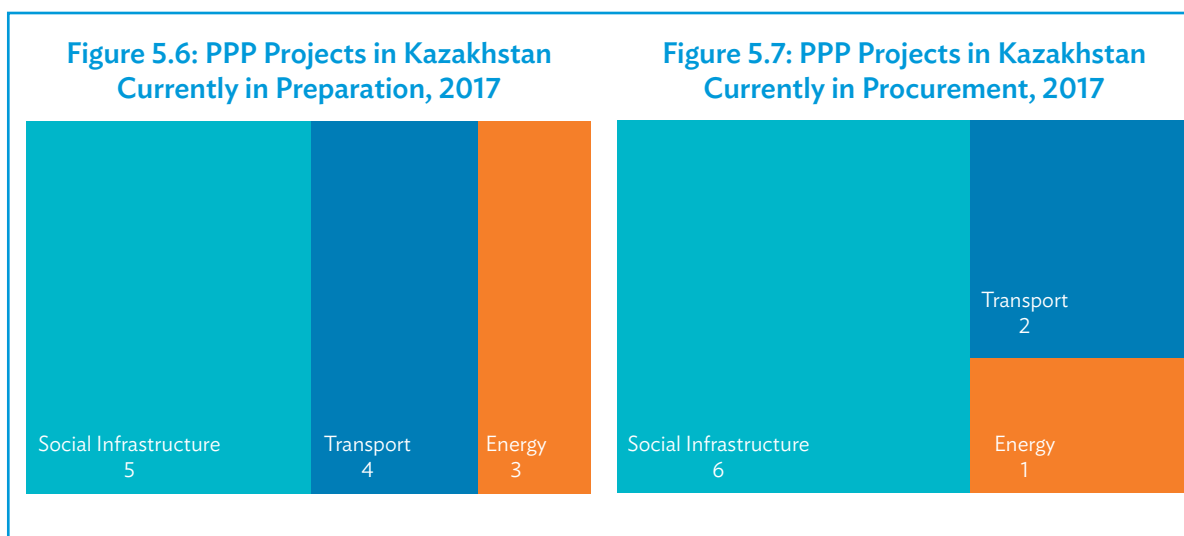
Source: Mott MacDonald.

Figure 5.5: Share of PPP Projects in Kazakhstan with Foreign Lender Participation by Sector, 1990–2017



Land resettlement disputes continue to be an issue, which can cause delays to infrastructure projects, due to approaches that are not compliant with the Equator Principles. Also, currently, there is no formal published PPP pipeline. Other challenges tend to be more sector specific, such as the low power and heating tariffs in the energy sector and the dominance of the national railway company “Kazakhstan Temir Zholy (KTZ)” in the development, operation, and maintenance of railway transport.

Prior to the adoption of the PPP law, approximately eight PPP projects had reached financial close, many involving foreign investors (Figure 5.1). For clarity, this number does not include projects where private sector investor is the promoter and grantor (merchant projects).



The research has identified another 21 PPP projects, which are currently in preparation and procurement, mainly strategic transport initiatives or social infrastructure projects. Of those projects currently in procurement, five are in the social infrastructure sector and one in the renewable energy sector.

Key Developments from 2016

There have been no particular changes of significance from 2016 in the PPP environment in Kazakhstan.

5.1 Country Profile

5.1.1 Regulatory Framework

5.1.1.1 PPP Law

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

	1990–2016	1990–2017	In 2017
Number of PPP projects that reached financial close under the latest PPP law	8	8	–

In 2015, a new law on PPP was adopted in Kazakhstan to create a common legal framework to regulate PPP projects. The law entered into force on 22 November 2015.

Historically, a concession law was applicable exclusively to build–transfer–operate projects. Amendments were introduced in July 2014, which attempted to broaden the scope of application of the concession law.

Therefore, today, the PPP regulation framework includes the following two key legal acts:

- Law No. 167-III ZRK on Concessions (the “Concession law”); and
- Law No. 379-V ZRK on Public–Private Partnership, dated 31 October 2015 (the “PPP law”).

Additional laws and codes include the following:

- the Commercial Code of Kazakhstan,
- the Law of Kazakhstan on State Property,
- the Tax Code of Kazakhstan,
- the Land Code of Kazakhstan,
- the Budget Code of Kazakhstan,
- the Law of Kazakhstan on Securities Market,
- the Law of Kazakhstan on Project Finance and Securitisation,
- the Law of Kazakhstan on Special Economic Zones, and
- the Law of Kazakhstan on Natural Monopolies.

The concession agreements are governed by the general provisions of the PPP law and, in specific cases, by the concession law, and the interaction between both laws remains to be clarified from the legal perspective (Dentons 2015, Grata Law Firm 2016).

5.1.1.2 PPP Types

	2016	2017
Number of PPP types defined in the PPP regulations	7	7

The PPP law expanded the list of PPP arrangements. There are now two ways to formalize a PPP:

- on an institutional basis (with the creation of a special purpose vehicle as a joint venture), or
- a contractual basis (without the creation of a special purpose vehicle).

The following types of contracts are also now included in the new PPP law:

- concession contract;
- rental/lease of state-owned property;
- trust management of state-owned property;

- finance lease contract;
- contracts for the development of technologies and preproduction prototypes, for conducting pilot tests, and for short-run production;
- service contracts; and
- life cycle contract.

Section 6 of Article 1 of the PPP law provides for an extremely broad concept of a PPP as a “form of cooperation between the public partner and a private partner that corresponds to the features defined by the law.” Such features include

- building of relations between the state partner and a private partner through entering into a PPP contract;
- medium-term or long-term PPP project implementation (from 3 years to 30 years, depending on the particular features of the PPP project);
- joint participation of the state partner and a private partner in PPP project implementation; and
- combining resources of the state partner and a private partner for PPP project implementation.

5.1.1.3 Eligible Sectors

	2016	2017		2016	2017
Transport			Energy		
Roads	✓	✓	Power generation	✓	✓
Railways	✓	✓	Power transmission	✓	✓
Ports	✓	✓	Power distribution	✓	✓
Airports	✓	✓	Oil and gas	✓	✓
Water and wastewater	✓	✓	Information and communication technology	✓	✓
Municipal solid waste	✓	✓	Social infrastructure	✓	✓

The law states that PPP can be used to implement projects in any sector of the economy. Declared priorities are education, healthcare, transport, power industry, and housing and public utilities.

However, the resolution of the Government “On List of Objects Which Cannot Be Transferred for Implementation of Public Private Projects, Including into Concession,” No. 710, dated 6 November 2017, defines some limits for concession projects in key sectors: certain types of property may not be PPP or concession assets, such as land, water, property of national bodies, military equipment, backbone railway network, among others.

According to the decree, among other things:

- Water cannot be transferred into concession, but only as part of land use for the purposes of realization of a concession project.
- Health organizations acting in the area of blood supply service and prevention of HIV/AIDS and organizations of emergency medicine cannot be transferred through PPP.

This decree applies to both the PPP law and concession law.

It should be noted that land not being an asset that can be transferred into PPP does not mean that private ownership is not allowed (Section, 1.1.1.6); however, PPPs cannot be used only for the purpose of buying land.

5.1.1.4 Unsolicited Bids

	2016	2017
Acceptance of unsolicited proposals	✓	✓
Eligibility of the project proponent to have:		
Competitive advantage at bid evaluation	×	×
Swiss challenge	✓	✓
Compensation of the project development cost	✓	✓
Government support for land acquisition and resettlement cost	✓	✓
Government support in the form of viability gap fund and guarantees	✓	✓

Article 44 of the new PPP law stipulates that selecting a private partner through direct negotiations is possible; direct negotiations are allowed if the PPP project is initiated by a private partner that possesses the PPP facility, based on private ownership or long-term lease right.

A project initiated by the private partner will be subjected to an assessment, and the procurement authority may initiate a competitive PPP procurement procedure. It is, however, noted that provisions regulating the evaluation of unsolicited proposals do not address the need to ensure that the project is consistent with government priorities.

The projects realized from unsolicited bids were developed before the enforcement of the concession law, which did not allow unsolicited proposals.

5.1.1.5 Institutional PPPs

	2016	2017
Are institutional PPP arrangements allowed (e.g., joint venture between government or state-owned enterprises and private firms as a special purpose vehicle company)?	x	x

	1990–2016	1990–2017	In 2017
Institutional PPP projects (number)	no data	no data	no data
Institutional PPP projects (as a share to the total number of PPP projects)	no data	no data	no data

It is worth noting that, according to the European Bank for Reconstruction and Development (EBRD),² the regulation of state-owned enterprises (SOEs) remains underdeveloped. The tariff-setting methodology, the capacity of the regulator, and other aspects of regulation in natural monopoly sectors, such as electricity transmission and distribution, and water and wastewater, all remain underdeveloped; although steps have been taken (for example, adoption of the new utility tariff methodology, which is now being piloted) to enhance the regulation.

In addition, efforts to privatize SOEs have had mixed results to date. Gradual sale of stakes in SOEs to local and international investors is a critical part of making these companies more efficient and more competitive, and, ultimately, transferring them to majority private ownership. However, previous privatization efforts have had limited success. For example, under the People's Initial Public Offerings program announced in 2011, out of initially planned five companies, only stakes in KazTranOil (in 2012) and Kazakhstan Electricity Grid Operating Company (KEGOC) (in 2014) were sold on the local stock exchange ("KASE"). Also, under the "2014–16 privatization programme," where the plan was to sell stakes in 106 companies, only 37 companies were sold over 2014–2015.

5.1.1.6 Land Rights

	2016	2017
Which of the following is permitted to the private partner?		
Transfer land lease/use/ownership rights to third party	✓	✓
Use leased/owned land as collateral	✓	✓
Mortgage leased/owned land	✓	✓

² EBRD. 2017. Kazakhstan Diagnostic Paper: Assessing Progress and Challenges in Developing Sustainable Market Economy.

	2016	2017
Is there a legal mechanism for granting wayleave rights, for example, laying water pipes or fiber cables over land occupied by persons other than the government or the private partner?	✓	✓
Is there a land registry/cadastre with public information on land plots?	✓	✓
Which of the following information on land plots is available to the private partner:		
Appraisal of land value	✓	✓
Landowners	✓	✓
Land boundaries	✓	✓
Utility connections	×	×
Immovable property on land	✓	✓
Plots classification	✓	✓

Kazakhstan laws and regulations regarding land are derived from the Constitution, which states that land (surface and underground) is owned by the state, but can also be privately owned (Article 6.3 of Land Code 2003).

Land plots, except for land intended for the maintenance of commercial agricultural production and forestry, may be in the private ownership of foreign citizens, stateless person, and foreign legal entities (nongovernmental).

When land is private property, the state can only reclaim it for specific uses (e.g., road construction) and has to compensate the owner for the asset. This is because the land law covers the reservation of land for the state's needs. The date of the purchase should be at least 3 months after the date of the publication of the decision on purchase. In practice, land acquisition by the state and the compensation payable are the subject of frequent disputes in Kazakhstan and may be a cause of project delay and cancellation.

The mechanism of the land transfer into a PPP and back to the public sector at the end of a PPP project is not clear. However, there is evidence of land being used as state contribution to a PPP project, and also an existing law forbids using a PPP as a mechanism to buy land.

5.1.1.7 Environmental and Social Issues

	2016	2017
Is there a local regulation establishing a process for environmental impact assessment?	✓	✓
Is there a legal mechanism for the private partner to limit environmental liability for what is outside of its control or caused by third parties?	✗ ^a	✗
Is there a local regulation establishing a process for social impact assessment?	✓	✓
Is there involuntary land clearance for PPP projects?	✓	✓

Note:

^a Environmental liability is regulated by laws and there is almost no room to regulate it contractually.

In Kazakhstan, the environmental legislation falls under the Environmental Code, 2007.

The environmental impact assessment is mandatory for facilities that can have an impact on the environment or human health (International Comparative Legal Guides 2016).

It is to be noted that the PPP law does not require environmental or urban and zoning permits before calling for tenders.

Although there are regulations in relation to social impact assessment, the processes undertaken are often below the performance standards of multilateral banks and not compliant with Equator Principles. In particular, compensation for resettlement can be calculated by a range of methods, which may not reflect true market value. Compensation payments may appear arbitrary and are the subject of many disputes between the state and the landowners.

5.1.1.8 Foreign Investor Participation Restrictions

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Transport			Energy		
Roads	100%	100%	Power generation	100%	100%
Railways	100%	100%	Power transmission	100%	100%
Ports	100%	100%	Power distribution	100%	100%
Airports	100%	100%	Oil and gas	100%	100%
Water and wastewater			Municipal solid waste	100%	100%
Bulk water supply and treatment	100%	100%	Social infrastructure		
Water distribution	100%	100%	Healthcare infrastructure	100%	100%

Maximum allowed foreign ownership of equity in greenfield projects						
Wastewater treatment	100%	100%		Healthcare services	100%	100%
Wastewater collection	100%	100%		Education infrastructure	100%	100%
Information and communication technology				Education services	100%	100%
Fixed line infrastructure	49%	49%		Government buildings	100%	100%
Fixed line services	49%	49%		Prisons and correction centers	100%	100%
Wireless/mobile infrastructure	100%	100%		Social housing	100%	100%
Wireless/mobile services	100%	100%		Sport and leisure facilities	100%	100%

Is there any restriction for foreign investors on?	2016	2017
Land use/ownership rights as opposed to similar rights of local investors	no	no
Currency conversion	yes	yes

A general restriction exists for foreign entities to directly manage and operate a telecom trunk network. Unless approved by the government, foreign entities shall not own or operate more than 49% stake in a legal entity carrying out activities in the telecom industry. This restriction will be removed from 1 June 2018 due to Kazakhstan's accession to the World Trade Organization (except for Kazakhtelecom JSC). Otherwise, there are no sector restrictions for foreign investors to develop and operate PPP projects.

Foreign ownership of land is allowed. Only the use of agricultural lands (by foreigners and legal entities where foreign shareholding is more than 50%) is restricted.

Foreign workers in Kazakhstan need a work permit (except for citizens of countries of the Eurasian Economic Union). There are two types of work permits:

- a work permit issued to a foreign employee; and
- a permit issued to an employer for engaging foreign employees.

5.1.1.9 Dispute Resolution and Enforcement Mechanism

	2016	2017
Can a foreign law be chosen to govern PPP contracts?	✓	✓
What dispute resolution mechanisms are available for PPP agreements?		
Court litigation	✓	✓
Local arbitration	✓	✓
International arbitration	✓	✓
Has the country signed the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?	✓	✓

The PPP law explicitly confirms that, if a private sector partner under a PPP agreement is a nonresident, the parties shall have discretion to choose the applicable law of the PPP agreement. This was not the case in the concession law.

International arbitration has a yellow indicator in the table above to reflect the fact that, although international arbitration is allowed, recognition and enforcement of foreign arbitral awards are not straightforward in Kazakhstan; pursuant to Article 57 of the PPP law, disputes relating to the execution and termination of a PPP contract shall be resolved in accordance with the legislation of the Republic of Kazakhstan and the PPP contract.

When the dispute cannot be resolved, the parties to the PPP contract have the right to settle the dispute in accordance with the requirements of the Republic of Kazakhstan legislation in the courts or in arbitration. Only PPP projects of special importance can benefit from the international arbitration clause in the PPP agreement provided that the private partner is a nonresident. Generally, a state-owned party needs special consent to agree to the arbitration clause.

For a project to be recognized as a project of special importance, it is required by the Schedule 4 of the Order 725, among others, to have an estimated total value for construction of not less than T9.6 billion (equivalent to about \$30 million) based on the monthly calculated index in 2018. No official document providing an updated value was found since.

5.1.1.10 Lender's Security Rights

	2016	2017
Does the law specifically enable lenders the following rights?		
Security over the project assets	✓	✓
Security over the land on which they are built (land use right)	✓	✓
Security over the shares of a PPP project company	✓	✓

	2016	2017
Can there be a direct agreement between the government and lenders?	✓	✓
Do lenders get priority in the case of insolvency?	✗	✗
Can lenders be given step-in rights?	✗	✗

The Civil Code of Kazakhstan provides for the following types of security interests: penalty, pledge, retention of the debtor's property, suretyship, guarantee, deposit, and guarantee deposit. Pledges and guarantees are the most commonly used forms of security in Kazakhstan.

Though assignment is not, strictly speaking, a type of security under Kazakh law, it is quite often a part of a standard security package in international finance transactions.

Furthermore, in a typical project finance deal, creditors require so-called "step-in" rights that enable them to appoint a nominee to undertake the project company rights together with the project company itself (with the project company remaining liable for all the obligations), or appoint a new obligor in the place of the project company to repay the amounts due to the lenders. These step-in rights enable the lenders to take over control of the project and implement the project by finding a long-term buyer, thus ensuring that the project continues generating revenues. It should be noted that Kazakh law does not recognize the concept of step-in rights.

In general, a separate agreement is necessary to establish a security over an asset, and a normal form of an asset security is a pledge. A pledge can be established over any property including assets and other property rights (rights of claims), except for goods prohibited for circulation (e.g., certain types of land, medals, and orders). Pledges over immovable property are subject to state registration.

5.1.1.1 Termination and Compensation

	2016	2017
Does the law specifically enable compensation payment to the private partner in case of early termination due to:		
Public sector default or termination for reasons of public interest	✓	✓
Private sector default	✗	✗
Force majeure	✓	✓
Does the law enable the concept of economic/financial equilibrium?	✗	✗
Does the law enable compensation payment to the private partner due to:		
Material adverse government action	✓	✓
Force majeure	✗	✗
Change in law	✗	✗

The regulatory framework expressly regulates the modification allowed or renegotiation of a PPP contract, and in particular

- change in the investment plan or contract duration,
- in case of a force majeure event, and
- a material adverse action from the government.

According to the PPP law, the public partner can terminate the PPP agreement by the court's order only

- in case of material breach of the agreement by the private partner,
- if the private partner is in bankruptcy, and
- in the interest of society and the state.

Similarly, the private partner can terminate the agreement by the court's order, but only in case of material breach of the agreement by the public partner.

5.1.1.12 Government Support

	2016	2017
Is project development fund available?	✓	✓
Land acquisition support from the government:		
Resettlement and/or compensation cost to residents at the project site	✓	✓
Imposed limits on time frame to complete land acquisition (day)	no data	no data
Is there dedicated agency to streamline land acquisition?	✓	✓
Exemption from/reduction of land use fees	✗	✗
Viability gap fund (VGF)	✓	✓
Limits to VGF as a percentage of projects capital cost	no data	no data
Government guarantees:		
Currency inconvertibility and transfer risk	✓	✓
Foreign exchange risk	✓	✓
War and civil disturbance risk	✗	✗
Breach of contract risk	✗	✗
Regulatory risk	✗	✗
Expropriation risk	✓	✓
Government payment obligation guarantee	✓	✓
Credit guarantees	✓	✓

	2016	2017
Minimum demand/revenue guarantee	no data	no data
Availability-/performance-based payment contracts	✓	✓
Tax subsidies	×	×

Those indicators relating to guarantees and availability payments (marked red in the above table) reflect the fact that there is no specific law enabling such guarantees or availability payments to be provided, although it may be possible that some guarantees could be provided within an individual contract.

Details of available government support for PPP projects in Kazakhstan are shown in Table 5.1.

Table 5.1: Details of Available Government Support for PPP Projects in Kazakhstan

Government Support Type	Comments
Land acquisition and resettlement	A decree has to be published by the government or the local executive body (Akimat) on the planned alienation of land, indicating the purpose, the location, the owner, and the date of the property.
Project development fund	Kazakhstan Project Preparation Fund has a role in providing funding for the development of project documentation and structuring of investment and infrastructure projects, including PPP projects, as well as the implementation of the developed project documentation.
Viability gap fund	This is no explicit provision in the regulations for this. However, there is possible support, referred to as “cofinancing” in the law, which is a grant that comes during the construction phase if the project is not sustainable on commercial terms.
Government guarantees	<p>The PPP law contemplates various measures of state support to encourage private investments. The total amount of state support and payment from the state budget cannot exceed the total capital expenditure of the project.</p> <p>The PPP law provides a non-exhaustive list of measures:</p> <ul style="list-style-type: none"> • state sureties for infrastructure bonds (not necessarily placed on the Kazakhstan stock exchange); • state guarantees for loans; • transfer of the exclusive intellectual property rights owned by the state to the concessionary; • provision of “in-kind grants” (e.g., land, machinery); • cofinancing of concession projects by the state; and • guaranteed offtake by the state of a certain number of goods (works, services) to be produced by the concession facility.

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Table 5.1 *continued*

Government Support Type	Comments
Availability/performance-based payment mechanism	Both the concession and the PPP laws provide the concept of “facility availability payment” and state subsidies as additional sources of income and reimbursement of expenses. Unlike the concession law, however, the PPP law does not provide a requirement for the PPP project to be “socially important” to qualify for the availability payment.
Tax subsidies	Investment preferences, such as tax subsidies, are not applicable to PPP projects according to the Law on Introduction of Changes to Certain Legislative Acts of the Republic of Kazakhstan on Improvement of Investment Climate introduced in 2014.

PPP = public–private partnership.

Source: World Bank Group. Benchmarking PPP Procurement 2017 in Kazakhstan.

According to the information collected by the World Bank and IJGlobal, closed PPP projects received government support as follows:

PPP projects that received government support	1990–2016	1990–2017	In 2017
Viability gap fund	–	–	–
Government guarantees	1	1	–
Availability-/performance-based payment basis	1	1	–

Exhaustive data regarding PPP projects that received government support in the form of land acquisition and VGF have not been available. It is known that Shar-Ust-Kamenogorsk Railway Concession received debt guarantee, while Karaganda Kindergartens PPP was the project implemented on availability/performance (payment basis).

5.1.1.13 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Power purchase agreement	✓	✓
Capacity take-or-pay contract	×	×
Fuel supply agreement	×	×
Transmission and use of system agreement	✓	✓
Performance-based operation and maintenance contract	×	×
Engineering procurement and construction contract	✓	✓

5.1.2 Institutional Capacity for Implementation

5.1.2.1 Institutional Setup

	2016	2017
Is there a specialized government agency (or agencies) established for PPP purposes (e.g., PPP unit)?	✓	✓
What role does this PPP unit have?		
Guidance to and coordination between other government agencies	✓	✓
Supporting (e.g., PPP project preparation, appointment of advisers, running PDF)	✓	✓
Appraisal of PPP project feasibility studies	✓	✓
Approval of PPP projects	✓	✓
Procurement	✗	✗
Managing, monitoring, and enforcing ongoing PPP contracts	✗	✗

Details of institutions promoting PPP in Kazakhstan are shown in Table 5.2.

Table 5.2: PPP-Promoting Institutions in Kazakhstan

Institution	Role in Promoting PPP
Government of Kazakhstan	Approves the list of “PPP projects of special importance” and the list of PPP facilities that require closed competitive bidding process.
Ministry of National Economy	Responsible for the state policy and framework for implementation of PPP projects and coordination of the PPP activities within the country.
Ministry of Finance	Executes state guarantee agreements and state surety agreements on behalf of the state.
Each central government authority (sector ministry)	Responsible for country-scale PPP projects within its sectors of responsibility. Sector ministry prepares concession proposals related to the national state property project, taking into account private initiative proposals, and organizes the tender.
Local governors (Akims)	Responsible for smaller-scale regional PPP projects in their respective regions. It prepares proposals related to projects that are municipal property and acts as organizer of the tender process or direct negotiations. The list of PPP projects has to be approved by the local parliament (Maslikhat).

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Table 5.2 continued

Institution	Role in Promoting PPP
Centre for Public–Private Partnership (the PPP Center)	The PPP Center is a research and expertise center acting as an independent adviser on PPPs for the Government of Kazakhstan.
Kazakhstan Project Preparation Fund	Established in 2014, jointly by the state-owned company Baiterek Holding and the Kazakhstan PPP Center, Kazakhstan Project Preparation Fund aims to promote infrastructure development through the provision of project development funding and services on structuring and support of infrastructure projects.

PPP = public–private partnership.

Source: Grata Law Firm. Kazakhstan overview. PPP Center website.

5.1.2.2 Project Planning

	2016	2017
Is there a PPP project pipeline developed and available?	x	x
Is preliminary selection of PPP projects consistent with public investment prioritization?	✓	✓
Is there screening/identification methodology to identify a list of potential PPP projects from public investment priority projects?	x	x

The PPP Center advises the government on PPP projects and assesses the consistency of each project regarding the government development strategy.

The PPP law only provides that the procuring authority issue a public procurement notice on the PPP. Information on the tender has to be publicized on the official website of the organizer of the competition (Article 36 of the PPP law) and published in the newspaper in both Kazakh and Russian languages.

A project database exists on the PPP Center website, which presents “closed” and “planned for implementation” projects. However, there is no information provided on the planned pipeline.

5.1.2.3 Project Preparation

	2016	2017
Number of project appraisal stages	no data	no data
What feasibility analyses are required for the project to be approved as a PPP?		
Technical feasibility	✓	✓
Financial feasibility	✓	✓
Legal feasibility	✓	✓

	2016	2017
Environmental and social sustainability	✓	✓
Value for money assessment	✓	✓
Fiscal affordability assessment	✓	✓
PPP structuring and risk allocation	✓	✓
Initial market testing	✓	✓
Number of approvals to be obtained by public sector to get final go-ahead to commence PPP project procurement	no data	no data
Is the approval from the Ministry of Finance or equivalent required before commencement of procurement?	✓	✓
Is it a normal practice to appoint independent, international, and qualified advisors to assist the government with project preparation?	✓	✓

Pursuant to Article 21 (3) of the PPP law, the Ministry of Finance (Central Budgetary Authority) approves the tender documentation of the PPP Project and drafts the PPP contract, including in case of introducing respective amendments.

5.1.2.4 Risk Allocation

	2016	2017
Preferred risk allocation matrix as reference	✓	✓

Risk allocation is to be analyzed during project preparation. Pursuant to Article 14 of the PPP law, the list of risks arising in the various stages of a PPP is determined by the central authorized body on state planning. Distribution of risks between the public partner and the private partner, as well as necessary measures to mitigate the identified risks, are directly fixed in the contract of the PPP.

5.1.2.5 Procurement

	2016	2017
Is competitive bidding the only method for PPP partner selection?	×	×
In case of competitive tender:		
Prequalification required?	✓	✓
Minimum time allowed to submit prequalification/expressions of interest (day)	20	20

	2016	2017
Minimum time allowed to submit a bid:		
Domestic bidding (day)	60	60
International bidding (day)	no data	no data
Is negotiation available?	✓	✓
Is there a process allowing unsuccessful bidders to challenge the award/ make a complaint?	no data	no data
If yes, maximum time allowed to submit a complaint starting from announcement of a preferred bidder	no data	no data
Maximum time limit from bid closing date until selection of a preferred bidder	no data	no data
Maximum time limit from selection of a preferred bidder until signing the contract	90	90
Transparency. Which of the following is published?		
Procurement notice	✓	✓
Q&A during bid clarification stage	✓	✓
Evaluation results to bidders	✗	✗
Award notice	✓	✓
Contract	✗	✗
Confidentiality	no data	no data

Unlike the concession law, the PPP law provides for the possibility to select a private partner via the following processes:

- a tender (open/closed, two-stage/simplified), or
- “direct negotiations” (see Article 31.1 of the PPP law).

The simplified tender procedure can be held for local projects that involve amounts not exceeding the statutory limit of T4 million (monthly indexed) and that are not natural monopolies projects.

Under the PPP law (Article 37), the tender documents detail the stages of the procurement process, including the following information:

- requirements for documents confirming compliance with potential private partners and qualification requirements;
- information list containing description of the PPP project;
- location of the project;
- expected type and amount of state support, and also sources of cost-recovery and income generation from the PPP;

- draft contract of PPP;
- description of the criteria for determining the best tender bid;
- indication of the currency, which should be expressed in the parameters of the PPP project, and the exchange rate that will be applied to bring the single currency for the purpose of comparison and evaluation;
- requirements regarding the language of the bid documentation;
- indication of the right for a potential private partner to modify or withdraw its tender bid before the deadline for submission of bids;
- contents of the tender application; the manner, place, and deadline for submission of bids and actions; and the modalities of ensuring a competitive bid;
- methods of obtaining clarification on the content of the tender documentation; and
- the procedures, place, date, and time of opening bid envelopes.

Pursuant to Article 42 of the PPP law, a prequalification can be done when using a two-stage procedure for the selection of the private partner. At the first stage, the procuring authority provides the potential bidders with the technical assignment. The potential bidders then submit their technical solutions for the assignment for consideration by the procuring authority. The potential bidders with the best technical solutions are then invited to proceed to the second stage by the procuring authority.

It is noted that the process of evaluation is regulated by the rules on Organization of Tender for Selection of a Private Partner and Criteria for Selection of the Best Tender Bid approved by Order No.157 of the Minister of National Economy dated 22 December 2014. Therefore, the procuring authority has to evaluate the proposals strictly and solely in accordance with the evaluation criteria stated in the tender documents.

The PPP law also provides for a “competitive dialogue procedure,” which allows the public partner to enter into a dialogue with prequalified bidders before finalizing the tender documentation.

5.1.3 PPP Market Maturity

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close	8	8	-
PPP projects currently in preparation	n/a	n/a	12
PPP projects currently in procurement	n/a	n/a	9

The majority of the 21 projects currently in preparation or in procurement are in the transport, renewable energy, and social infrastructure sectors.

5.1.4 Financial Facilities

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	3	3	-
PPP projects that received export credit agency/international financing institution financing	-	-	-

	2016	2017
Availability of nonrecourse/limited recourse hard currency loan	✓	✓
Maximum tenor (year)	no data	no data
Up-front arrangement fee	Up to 100 bps	Up to 100 bps
Floor rate (reference rate)	LIBOR	LIBOR
Margin rate	150–800 bps	150–800 bps
Political risk cover premium	10–50 bps	10–50 bps
Availability of nonrecourse/limited recourse local currency loan	✓	✓
Maximum tenor (year)	5–10 years	5–10 years
Up-front arrangement fee	Up to 100 bps	Up to 100 bps
Floor rate (reference rate)	no data	no data
Margin rate	no data	no data
Availability of interest rate swaps	Only for hard currency loans	Only for hard currency loans
Forward duration of interest rate swap (year)	no data	no data
Availability of currency swaps	✓	✓
Forward duration of currency rate swap (year)	1–2 years	1–2 years
Project financing through project bond issuance	✗	✗
Percentage of project bonds out of total debt for project financing	n/a	n/a
Availability of project financing from local public sector banks	✓	✓
Max tenor for loan from local public sector banks (year)	20 years	20 years

	2016	2017
Percentage of foreign debt out of total debt for project financing	<30%	<30%
Typical D:E ratio	no data	no data
Timeline to financial close	6–12 months	6–12 months
Minimum DSCR covenant levels	1.1x–1.5x	1.1x–1.5x

bps = basis points, D = debt, DSCR = debt-service coverage ratio, E = equity, LIBOR = London interbank offered rate.

Project financing in Kazakhstan at present generally covers projects in the \$10 million–\$200 million range, which is small by global standards. Development Bank of Kazakhstan (DBK), which is 100% state-owned, provides infrastructure project financing on selected project basis. Nonetheless, the debt market is becoming a more important source of funding for a wider range of Kazakh companies. Access to debt capital markets is expanding to a wider range of borrowers.³

The principal sources of financing in Kazakhstan are as follows:

- **Local and foreign bank debt.** local commercial banks often provide financing; foreign debt in the form of bilateral and syndicated loans is also very common.
- **Debt from state-owned institutions.** Kazakhstan provides financing through various institutions, including a number of state development institutions for the promotion of entrepreneurship.
- **Debt from multilateral development institutions.** a number of international development institutions operate in Kazakhstan and provide financing in the project finance area, including the Eurasian Development Bank and the European Bank for Reconstruction and Development (EBRD).
- **Bond finance.** local entities can issue corporate bonds both under local law and foreign law; listing on the Kazakh stock exchange is attractive due to an exemption from withholding tax for listed bonds.

5.2 Roads

5.2.1 Regulatory Framework

5.2.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

³ P. Gill. 2006. Project Finance Takes Shape in Kazakhstan. *Euromoney*. 1 May. <https://www.euromoney.com/article/b1321xx50qs8j6/project-finance-takes-shape-in-kazakhstan>.

5.2.1.2 Government Contracting Agency

The Government of Kazakhstan, through the Ministry of Investments and Development, is the awarding authority for the road sector. Currently, the Committee of Roads of the ministry is the contracting agency for both the Big Almaty Ring Road and the Bypass Road in Shymkent.

It is noted that the Big Almaty Ring Motor Road PPP project is expected to reach financial close in 2018. The project seeks to reduce congestion on Almaty's city roads from freight. It involves the construction of a six-lane ring road, including 21 bridges and 19 viaducts. The authorities selected this project as a pilot to demonstrate the viability of PPP/concession funding structures in the Kazakh road sector. The original project was awarded but then stalled, restructured, and now awarded to companies from Turkey and the Republic of Korea, which signed a concession agreement in February 2018. It was one of the long-awaited projects, for which the general layout was approved in 2002.

It can be noted that a memorandum of understanding was signed in November 2015 between the EBRD and the Ministry of Investment and Development to boost cooperation in the road sector (EBRD 2015). The EBRD will support the national economic policy, which aims at investing in infrastructure.

5.2.1.3 Sector-Specific Regulations

	2016	2017
Does the private partner have the legal right to charge users?	✓	✓

Construction and operation of the Bukhtarma Reservoir Bridge will be based on both compensation of investment from the government and profits from the toll road (PPP Centre, Projects 2017).

5.2.1.4 Sector Regulators

Kazakhstan has three road networks, each under the responsibility of different levels of government and their respective road organizations:

- National roads are under the responsibility of the Ministry of Transport and Communication and managed by the Committee of Roads.
- Local or rural roads are under provincial governments.
- Urban roads are under the municipality.

5.2.2 Institutional Capacity for Implementation

5.2.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	×	×

The national Kazakhstan-2030 strategy for development provides for the implementation of seven long-term priorities, including improving physical infrastructure (more particularly transport and communication). The latest will be carried out via the *Nurly Zhol* infrastructure development plan.⁴

PPP pipeline of road projects is shown in Table 5.3.

Table 5.3: PPP Pipeline of Road Projects in Kazakhstan

No.	Project Name	Length (km)	Value (\$ million)	Status
1	Bypass Road in Shymkent (BOT Project)	48	65	Under development of concession proposal
2	Bridge across the Bukhtarma reservoir in Kurchum District of East Kazakhstan (Bukhtarma Reservoir Bridge Project)	1.3	112	In preparation

BOT = build–operate–transfer, km = kilometer, PPP = public–private partnership.

Source: PPP Centre Projects. 2017. *PPP Projects in Kazakhstan*. (accessed 15 March 2017).

5.2.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	2

The Bypass Road Project in Shymkent (BOT Project) is part of the “Silk way” redevelopment in Kazakhstan. It aims to ensure transport development and increase transit potential and competitiveness of the international transit route in the country. Construction period is expected to last 5 years (48 kilometers) for an initial investment of \$65 million and supported by the government.

⁴ Government of Kazakhstan. 2017. *Strategy and Programs: The Strategy for Development of the Republic of Kazakhstan*.

Construction and operation of the Bukhtarma Reservoir Bridge in Kurchum District is under revision of tender documentation by the PPP Center.

5.2.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	-	-	-
Competitive bidding process	-	-	-
PPP projects currently in procurement	n/a	n/a	1

5.2.3 Features of Past PPP Projects

5.2.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	-	-	-
PPP projects that reached financial close (\$ million)	-	-	-

The Big Almaty Ring Motor Road project was signed in February 2018 and will be funded by investors from Turkey and the Republic of Korea.⁵

5.2.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	-	-	-
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	-	-	-

⁵ IJ Global. 2018. *Update: Commercial Close for Almaty Ring Road PPP*. 22 February. <https://ijglobal.com/articles/132203/update-commercial-close-for-almaty-ring-road-ppp>.

5.2.3.3 Government Support

No information available. It is, however, noted that the Government of Kazakhstan is responsible for providing the land (land expropriation).

5.2.3.4 Payment Mechanism

The remuneration of the project is planned to be through availability payments. It is, however, noted that a toll system will be implemented; toll rates are to be set by the government, and the concessionaire is to collect tolls on behalf of the government and transfer all toll revenues to the state budget. The traffic risk is, therefore, transferred to the government.

5.2.4 Local Capabilities

Kazakhstan is becoming a key transit hub due to its location, with the People's Republic of China to the east, Europe to the west, the Russian Federation to the north, and South Asia and Iran to the south. Improving its infrastructure and logistical capabilities is a way for Kazakhstan to diversify its economy away from reliance on natural resource exports.

Road and infrastructure improvements are, therefore, a major component of the country's new *Nurly Zhol* economic policy. International multilateral organizations (the World Bank, the EBRD, and the Asian Development Bank) are expected to support the road network improvement by providing approximately \$4.2 billion (*The Astana Times* 2014).

Since 2006, the government has been realigning road sector responsibilities to clearly divide between

- the Ministry of Investment and Development, as the asset holder and client for the republican road network;
- the Committee of Roads, responsible for the development of policies and improvement of legal framework. At a local level, state institutions (called zhollaboratories) are formally responsible for the quality control of road works; and
- the Joint Stock Company Kazavtozhol (100% state-owned entity), as the national operator and under agency service agreement with the Committee of Roads for management of roads, realization of investment projects on development of international and national highways, procurement and supervision of (re)construction and various repair works, and the operation and maintenance of toll roads.

5.2.5 Challenges

Challenges of PPP progress in the road sector are provided in Table 5.4.

Table 5.4: Challenges of PPP Progress in the Road Sector in Kazakhstan

Challenges	Currently Implemented Tackling Measures
Road network and maintenance—Only 7% of the road sector budget is allocated to maintenance and the network is still incomplete. It is considered that about 60% of national roads require major rehabilitation and proper maintenance.	
Cross-border management—Procedures for customs and frontier inspection are complicated and not aligned with international standards, provoking traffic delays.	
Institutional and management gaps—While the Ministry of Transport has technical capacities to both plan and monitor projects, local administrations are less capable and need support. This gap is aggravated by the lack of experience in outsourcing works to the private sector.	

PPP = public–private partnership.

Source: ADB. Sector Assessment Summary. <https://www.adb.org/sites/default/files/linked-documents/cps-kaz-2012-2016-ssa-01.pdf>.

5.3 Railways

5.3.1 Regulatory Framework

5.3.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

5.3.1.2 Government Contracting Agency

Due to the presence of initiatives aiming at making Kazakhstan a strategic hub connecting Asia and Europe, railways are considered a primary sector for PPP development. A national rail operator, Kazakhstan State Railways (KTZ), was established in 1997 to merge three state enterprises and optimize the management structure of the transportation process. However, in September 2016, the Ministry of Investment and Development announced that the government has prepared a draft resolution for the separation of KTZ into infrastructure and operating companies (Barrow 2016). There have been no further updates on the status of this governance change since the report issue in 2017.

According to Article 5 of the PPP law, “industry operators”—such as Kazakhstan Electricity Grid Operating Company (KEGOC), the national transmission grid operator, or KTZ in the railway sector—can be parties to a PPP agreement.

5.3.1.3 Sector-Specific Regulations

The tariffs for railway services on the main railway network are subject to government regulations. The remaining components of tariffs for railway services are determined by competition within the sector (Baigazina 2015).

5.3.1.4 Sector Regulators

The railway sector is regulated by two state agencies:

- **Committee of Transport of the Ministry for Investment and Development**, responsible for the technical regulation, including issues related to security, access to infrastructure, and licensing; and
- **Committee on Regulation of Natural Monopolies and Protection of Competition**, responsible for tariff regulation of natural monopolies and companies occupying a dominant market position.

5.3.2 Institutional Capacity for Implementation

5.3.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	×	×

The development of rail transport and enhanced logistical efficiency and transport capacity is a key element for the advancement of the Kazakhstan economy. Indeed, the country has an export-oriented economy (oil, metal, and other materials) and is at a central point in the regional trades. Kazakhstan’s rail network potentially represents an efficient corridor in the “Eurasian Land-Bridge” project connecting Asia with Europe. In 2016, the volume of railway freight turnover was highest among all transport modes, accounting for 46% of total freight turnover with 237 billion ton-kilometers,⁶ and, due to its strategic location, Kazakhstan is expected to benefit from a potential increase of investment from the People’s Republic of China.

⁶ ITE Transport&Logistics. 2017. *Transport & Logistics in Kazakhstan: Sector Focus*. June.

An illustration of this strategy (Eurasian Development Bank 2015) is the joint venture, which was set up in 2010 between Alstom (a French company), Remlokomotiv (a subsidiary of KTZ), and the Russian company Transmahholding to build a state-of-the-art electric locomotive plant in Astana, financed by the Eurasian Development Bank (\$66 million). In 2016, Alstom became the main shareholder with a 50% holding.

PPP pipeline of railway projects is provided in Table 5.5.

Table 5.5: PPP Pipeline of Railway Projects in Kazakhstan

No.	Project Name	Length (km)	Value (\$ million)	Status
1	Almaty Light Rail	23	300	Preparation
2	Almaty Railway Bypass	61	297	Preparation

km = kilometer, PPP = public-private partnership.

Source: Infradeals. Infradeals Database. <https://www.infra-deals.com> (subscription only).

5.3.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	1

5.3.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	1	1	-
Competitive bidding process	-	1	1
PPP projects currently in procurement	n/a	n/a	1

The one project currently in procurement involves construction and operation of a light railway line in Almaty to replace the existing tram route. The projected length is 22.9 kilometers, including railway stations. The aim is to reduce the traffic congestion and improve the quality of public transportation services and safety and security of transport in the city of Almaty. The EBRD, which signed a memorandum of understanding with the city of Almaty in 2012, will support the project with a 10-year \$39.3 million loan.

5.3.3 Features of Past PPP Projects

5.3.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	1	1	–
PPP projects that reached financial close (\$ million)	231	231	–

There has been only one PPP project signed, namely the development and operation of the Shar-Ust-Kamenogorsk Railway. The project was executed in 2005, prior to the establishment of the PPP Center and the implementation of the concession law. The project was financed through the share capital of the project operator *Doszhan Temir Zholy* and a bond issue. The project was procured through a PPP mechanism, but, in practice, the lack of a legislative base was an issue for the project (Dyussenov 2015). For example, up to 2007, the state guarantee for *Doszhan Temir Zholy* bonds had been granted only for the period of construction, leaving bondholders unprotected against the concessioner default risk during the operating period. It is understood that, in 2008, the project went bankrupt.

5.3.4 Local Capabilities

According to the World Bank, key reforms have been aimed at separating infrastructure from rail transport to provide a clear strategic direction in developing railway connectivity between Europe and Asia. The national rail operator KTZ has a strategic role as a key logistics provider for transit traffic between Asia and Europe. KTZ is one of the principal implementers of the New Silk Road initiative, a multinational initiative to establish a network of enhanced overland and maritime economic corridors extending between the People's Republic of China and Europe.

As a state-owned company, KTZ has the task to develop, operate, and maintain railway transportation in Kazakhstan. Despite the liberalization of some segments of the railway services market, KTZ and its subsidiaries are major players in their respective market segments and, as a result, are subject to state regulation on monopolies.⁷

As stated in Section 1.3.2.1, an international player, Alstom, has entered Kazakhstan's railway market through a joint venture with KTZ.

⁷ Grata Law Firm. 2014. Natural Monopolies Regulation in Kazakhstan.

5.3.5 Challenges

As discussed in Section 3.3.1, the Shar-Ust-Kamenogorsk Railway project went bankrupt in 2008. This bankruptcy is one of the main reasons why pension funds are not very keen on investing in infrastructure bonds in Kazakhstan.

Challenges of PPP progress in the railway sector are provided in Table 5.6.

Table 5.6: Challenges of PPP Progress in the Railway Sector in Kazakhstan

Challenges	Currently Implemented Tackling Measures
The sector is dominated by a public-owned company	Key reforms of the transportation program for the railway sector aim at separating infrastructure from rail transport. However, the national railway company “Kazakhstan Temir Zholy” remains the main organization in the sector.
Obstacles, such as the inability to earn profits due to utility tariffs below cost-recovery levels, make transfer of ownership of “natural monopoly” companies to private hands particularly challenging.	

PPP = public–private partnership.

Source: EBRD. 2017. *Kazakhstan Diagnostic Paper: Assessing Progress and Challenges in Developing Sustainable Market Economy*.

5.4 Airports

5.4.1 Regulatory Framework

5.4.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

Airports can be owned by the state and/or private legal entities, including foreign legal entities (Article 5 and Article 64 of the Aviation Law).

5.4.1.2 Government Contracting Agency

The Ministry of Investments and Development has a Civil Aviation Committee in charge of the public procurement for civil aviation projects.

In addition, the Airport Management Group, as part of KTZ, is established for managing 11 state-run airports. KTZ signed a 7-year contract with Zurich Airport in 2015 to support them in operational and commercial issues, and to share international experience and technologies with local staff.

5.4.1.3 Sector-Specific Regulations

Basic services of airports are qualified as natural monopolies and regulated by the Natural Monopolies Regulation of Kazakhstan, 1998. This law is aimed at

- determination of the legal framework for the state control and regulation of activities in the natural monopolistic spheres, including the airport sector; and
- achievement of a balance of interests between consumers and holders of natural monopolies.

Air transportation and airport services are, therefore, subject to state tariff regulation.

In addition, the Aviation Law, 2010⁸ is the main legislative act regulating aviation in Kazakhstan, and it sets out the norms relating to

- state regulation and state control of airspace management and aviation operations;
- organization of airspace management, international flights, aircraft, aviation personnel, operators, airports, air services, and aviation work; and
- legal liability in the sphere of air services, actions, and activities that affect flight operating services, air accidents and their investigation, and rescue works in relation to aircrafts, their passengers, and crew members.

It is to be noted that generally either the airports' assets or share ownership in the airports is considered strategic objects (i.e., assets of socioeconomic significance for the development of Kazakh society, ownership of which may affect national security according to the Decree 2007, Section 1.1.1.3 above), provided that the relevant airport is included in the list of strategic objects established by the Government of Kazakhstan. Transfer of ownership of airports that have been included in the strategic objects list is subject to the approval of the Government of Kazakhstan.

⁸ Law of the Republic of Kazakhstan "On Use of Airspace of the Republic of Kazakhstan and Aviation Activity" No 339-IV dated 15 July 2010 (the "Aviation Law"). http://www.gratanet.com/up_files/AV17_Chapter-14_Kazakhstan.pdf.

5.4.1.4 Sector Regulators

Details of airport sector regulatory agencies in Kazakhstan are provided in Table 5.7.

Table 5.7: Airport Sector Regulatory Agencies in Kazakhstan

Agency	Function
Civil Aviation Committee (Ministry of Investments and Development)	Implements the regulative, realizable, and controlling functions, and takes part in implementation of the strategy functions of the ministry in the sphere of civil aviation. In charge of public procurement for civil aviation projects.

Source: Government of Kazakhstan, Ministry of Investments and Development. <http://mid.gov.kz> (accessed February 2017).

5.4.2 Institutional Capacity for Implementation

5.4.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	no data	no data
Is there a PPP project pipeline developed and available?	x	x

As the host country for the EXPO 2017, an international exposition, and a potential logistical hub of the New Silk Road, Kazakhstan has been investing in modernizing its air traffic infrastructure, again aiming to enhance the country's intentions to become a major transportation hub in Central Asia.

Only one airport PPP project is currently under procurement; however, it is worth noting that several projects are being implemented in the sector as public investments:

- Astana Airport—redevelopment project supported by the EBRD (\$46 million).⁹
- Shymkent Airport—construction of a new multimodal terminal has been announced by KTZ (*The Astana Times* 2015).

5.4.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

⁹ EBRD. 2015. Astana Airport. <https://www.ebrd.com/work-with-us/projects/psd/astana-airport-rehabilitation-.html>.

5.4.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	-	-	-
Competitive bidding process	1	1	-
PPP projects currently in procurement	n/a	n/a	1

In 2017, the public institution Department of passenger transport and roads of Kyzylorda region announced a tender to determine a private partner using two-stage procedures for the PPP project Construction of a new passenger terminal at Korkyt Ata Airport in Kyzylorda.¹⁰

5.4.3 Features of Past PPP Projects

5.4.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	1	1	-
PPP projects that reached financial close (\$ million)	31	31	-

There has been only one PPP project signed: developing and operating the Aktau Airport Terminal. The project was executed in 2007, under the concession law. The ATM Group won a build-operate-transfer contract for the operation of the airport and construction of a new terminal.

Aktau Airport Terminal	
PPP projects with foreign sponsor participation	Yes—the airport was awarded to a Turkish company, the ATM Group
Government support	No data
Tariffs	No data
Risk allocation	No data

¹⁰ Kazakh Invest. 2017. Announcement on Tender for Public-Private Partnership Project. June.

5.4.4 Local Capabilities

The operation and management of airports is centralized in Kazakhstan. The Airport Management Group, as part of KTZ, manages 11 regional state-run airports. The main objective is to bring the flight and air safety into conformity with the international standards and to improve financial performance of the state-run airports. For that purpose, KTZ signed a 7-year contract with Zurich Airport aimed at sharing international experience and technologies.

However, construction and operation of other Kazakhstan major airports have been awarded to international companies in the past, suggesting that private sector local capabilities are still limited:

- The Aktau Airport PPP project was awarded to a Turkish company.
- Astana Airport was awarded to a consortium of four international companies, including Marubeni Corporation (Japan), Siemens AG (Germany), John Laing PLC (United Kingdom), and Alsim Alarko AS (Turkey).
- The government is currently considering three proposals for redevelopment projects, all of them being led by international investment companies: Tengji Holding (People's Republic of China), Changi Airports International Limited (Singapore), and Vinci Group (France).
- Almaty Airport is operated by a subsidiary of Venus Airport Investments, a company registered in Amsterdam.

5.4.5 Project Financing

Information not available.

5.4.6 Challenges

Challenges of PPP progress in the airport sector are provided in Table 5.8.

Table 5.8: Challenges of PPP Progress in the Airport Sector in Kazakhstan

Challenges	Currently Implemented Tackling Measures
Liberalization of the sector	The gradual liberalization of air transport regulation is planned.
International standards and safety requirements—Quality of the air transport infrastructure is one of the key challenges of the sector: in 2014, only 10 out of 25 airports were compliant with the International Civil Aviation Organization standards. According to the International Air Transport Association, urgent attention to safety is required.	

PPP = public-private partnership.

Sources: Mott MacDonald; World Bank Group. 2016. *Kazakhstan Partnership Program Snapshot*. <http://pubdocs.worldbank.org/en/220651460698981308/Kazakhstan-Snapshot-s2016-en.pdf>.

5.5 Energy Sector

5.5.1 Regulatory Framework

5.5.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Power generation	100%	100%
Power transmission	100%	100%
Power distribution	100%	100%
Oil and gas	100%	100%

The 2003 Law on Investments¹¹ established a single investment regime for domestic and foreign investors. There is no restriction on foreign investors' participation in the energy sector.

5.5.1.2 Government Contracting Agency

Immediately following the dissolution of the Soviet Union, Kazakhstan's power system remained organized administratively on two levels: a national system and multiple regional systems. Power sector restructuring, including the separation of assets and corporatization of the operating entities, began in early 1996 with the adoption of a series of government resolutions. In September 1996, the government spun off all the high-voltage network assets into a new state-owned corporation, KEGOC. KEGOC also was designated to sign contracts with the generators previously signed by National Energy System Kazakhstanenergo.

In 2013, an Action Plan for the Development of Alternative and Renewable Energy in Kazakhstan 2013–2020 was approved to support the renewable energy sector.

The country has embarked on building a green economy, setting a clear target for 2030—reduce emissions by between 15% and 25%, compared with 1990 levels. Kazakhstan's strategy to reduce emissions is based on promoting a more decentralized and green energy supply system.

Key stakeholders of the sector are the Ministry of Energy, which is responsible for the projects' procurement and sector regulation, and KEGOC.

¹¹ Government of the Republic of Kazakhstan. 2003. *Law on Investments*. Astana. <http://investmentpolicyhub.unctad.org/InvestmentLaws/laws/98>.

5.5.1.3 Sector-Specific Regulations

In 2013, the Ministry of Environment and Protection published a document titled Transition of the Republic of Kazakhstan to Green Economy, which identified regulatory priorities as well as legislative opportunities for green growth.

An offtake of electric power is guaranteed by the law; the producer of renewable electricity may sell generated electricity using one of the following options:¹²

- to the Special Financial Settlement Centre at a fixed tariff indexed for inflation; and
- to customers at negotiable prices (in this case, the producer may not sell generated power through the first option).

Feed-In Tariff

With the assistance of the EBRD, a feed-in tariff (FIT) was approved to attract new investors and a standard power purchasing agreement was designed. The tariff was updated in 2014 (Section 1.5.3.3).

The 2009 Renewable Energy Source law¹³ provides two types of guarantees to energy investors:

- The law states that the output of renewable energy would be purchased at a fixed tariff existing at the date of conclusion of the power purchase agreement. Therefore, tariff changes will not be allowed in existing installations.
- The law recognizes the right of the Government of Kazakhstan to change the renewable energy tariff level, but this “does not apply to the existing power purchasing agreement.”

Nowadays, there is no adjustment mechanism provided by the legislation for fluctuations in exchange rate.

New Auction System for Renewable Energy

It is noted, however, that Kazakhstan might introduce a mechanism of auctions to develop renewable sources of energy from the beginning of 2018.¹⁴

Access Point

The Renewable Energy Source law also guarantees renewable energy source facilities free and nondiscriminatory access to the nearest point of connection to electrical or thermal grids of transmission companies. The law, however, does not give a clear guidance on potential liability of the network operators in case they refuse or delay the conclusion of the transmission agreement.

¹² Grata International. 2016. *Report on Renewable Energy Projects in Kazakhstan*. http://www.gratanet.com/en/publications/details/renewable_kazakhstan_2016.

¹³ Government of the Republic of Kazakhstan. 2009. *On Support for Use of Renewable Energy Sources*. Astana.

¹⁴ Renewable Market Watch. 2017. *Kazakhstan New Auction System for Renewable Energy (Solar, Wind, Biomass, Hydro, Geothermal)*. 24 August. <http://renewablemarketwatch.com/news-analysis/226-kazakhstan-new-auctionsystem-for-renewable-energy-solar-wind-biomass-hydro-geothermal>.

Benefits for Local Companies

In 2015, Kazakhstan adopted its first Commercial Code (Article 283) to systematize laws and regulations applicable to government regulation of business.¹⁵ The code provides local companies that operate in eligible areas (including renewable energy source) with the following benefits:

- exemption from custom duties and value-added tax on imported equipment, components, and raw materials;
- state in-kind grants (land plots, buildings, equipment, machinery) for a gratuitous use for the duration of the contract; the total amount of such in-kind grants shall not exceed 30% of the total investment;
- tax exemptions (corporate income tax 0% for 10 years, land tax 0% for 10 years, property tax 0% for 8 years);
- investment subsidy of compensation by the government of up to 30% of the costs relating to construction, assembly, and acquisition of equipment; and
- stability of tax law and labor laws.

License

Starting from 2012, only the purchase of electricity for resale is subject to licensing. Production, transmission, and distribution of electrical and thermal energy, and operation of power plants and electrical grids are not subject to licensing.

Monopolies Regulation

According to the Law on Natural Monopolies of July 1998, the natural monopolies in Kazakhstan include services related to

- oil/products transportation through trunk pipelines;
- marketable gas storage and transportation through connector pipelines, trunk pipelines, and/or gas distribution systems; storage tank system operation; and raw gas transportation through connector pipelines;
- transmission and distribution of electric power;
- production, transmission, distribution, and supply of heat energy;
- technical dispatch of electric power into grid and consumption of electric power; and
- balancing of production and consumption of electric power.

5.5.1.4 Sector Regulators

Details of energy sector regulatory agencies in Kazakhstan are provided in Table 5.9.

¹⁵ Baker McKenzie. 2015. *Newly Adopted Commercial Code in Kazakhstan*. Astana. <https://www.lexology.com/library/detail.aspx?g=e808a6d6-0f41-4c70-99d5-efcaa779fefe>.

Table 5.9: Energy Sector Regulatory Agencies in Kazakhstan

Agency	Function
Government of Kazakhstan	Approves the feed-in-tariffs (Article 5 of the RES law).
Ministry of Energy (MOE)	The MOE oversees national energy development, including electricity and renewable energy. Under the MOE, the Committee for Nuclear and Energy Supervision is the public authority for the state energy control. It is also responsible for supervision of the connection of renewable energy to electrical and thermal networks. In particular, the ministry keeps a list of eligible renewable energy producers/investors, to conclude an offtake agreement, such an investor has to be included into the list.
Agency for Regulation of Natural Monopolies	Regulates monopoly sectors. In the energy sector, it regulates transmission, distribution, and heat tariffs.
Kazakhstan Operator of Electric Energy and Power Market	Operates the centralized wholesale electricity trading market.
Local governments (Akimats)	Approval of construction projects with respect to renewable energy facilities, and reservation and allocation of land for the construction of the facilities (Article 7 of the RES law).

RES = Renewable Energy Source.

Source: ADB. Sector Assessment Energy.

Legal advisers have noted that there is no transparent procedure and time frame to make such an application and be included in such a list of eligible suppliers.

5.5.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Performance-based operation and maintenance contract	✓	✓
Engineering procurement and construction contract	✓	✓
Power purchase agreement	✗	✗
Capacity take-or-pay contract	✗	✗
Fuel supply agreement	✗	✗
Transmission and use of system agreement	✓	✓

5.5.2 Institutional Capacity for Implementation

5.5.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	×	×

The government has officially committed to renewable targets in the Strategic Plan for the Republic of Kazakhstan Development by 2020 and Strategy Kazakhstan 2050. The energy from renewable sources should account for 1% of power production by 2014, 3% of power production by 2020, and 11% by 2030. For the longer term, according to the strategy, the country targets to increase the share of power production from renewable and alternative sources of power up to 50% by 2050.

The Ministry of Energy has provided a list of renewable energy projects for 2013–2020. By 2020, the country should have 13 wind, 14 hydropower, and 4 solar power plants, as well as a nuclear power plant. However, the list does not specify which projects are PPP projects.

PPP pipeline of energy projects is provided in Table 5.10.

Table 5.10: PPP Pipeline of Energy Projects in Kazakhstan

No.	Project Name	Value (\$ million)
1	Gulshat PV Solar Plant (48 MW)	73
2	Kulan PV Solar Farm (29 MW)	51
3	Yereymentau Wind Farm (50 MW)	121
4	Burnoye Solar Plant Phase II	80

MW = megawatt, PPP = public-private partnership, PV = photovoltaic.

Source: Ministry of Energy. <http://energo.gov.kz/index.php?id=2095> (accessed February 2018).

5.5.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation		
Renewable energy generation	n/a	3
Thermal energy generation	n/a	-
Energy transmission and distribution	n/a	-

5.5.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	2	2	1
Competitive bidding process	-	-	-
PPP projects currently in procurement			
Renewable energy generation	n/a	n/a	1
Thermal energy generation	n/a	n/a	-
Energy transmission and distribution	n/a	n/a	-

The EBRD is financing the 50 MW Burnoye Solar-2 project in Kazakhstan in partnership with the multilateral Clean Technology Fund.¹⁶ The investment in the southern Zhambyl region follows Burnoye Solar-1, the award-winning, first utility-scale renewable energy project in Kazakhstan under the new legislation which enabled private investment in the sector. Burnoye Solar-2 is the second stage of an ambitious solar park demonstrating that renewable energy is taking hold in the country, which is still over 70% dependent on coal for energy production.

Burnoye Solar-2 will be built by the same investors as the first stage of the solar park: Samruk Kazyna United Green Energy Limited, a joint venture between UG Energy Limited, a privately owned investment company registered in the United Kingdom, and Samruk-Kazyna Invest, a division of the sovereign wealth fund.

5.5.3 Features of Past PPP Projects

5.5.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)			
Renewable energy generation	3	3	-
Thermal energy generation	-	-	-
Energy transmission and distribution	2	2	-
PPP projects that reached financial close (\$ million)			

¹⁶ EBRD News. EBRD Invests in Second Solar Park in Kazakhstan, Burnoye-2. <http://www.ebrd.com/news/2017/ebrd-invests-in-second-solar-park-in-kazakhstan-burnoye2.html>.

	1990– 2016	1990– 2017	In 2017
Renewable energy generation	295	295	-
Thermal energy generation	-	-	-
Energy transmission and distribution	no data	no data	no data

It is noted that AES Corporation handed over to Kazakhstan two hydroelectric power plants after the concession deal, under which they operated expired in 2017, 20 years after financial close.¹⁷

5.5.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)			
Renewable energy generation	2	2	-
Thermal energy generation	-	-	-
Energy transmission and distribution	2	2	-
PPP projects with foreign sponsor participation (as a share to the total number of energy PPP projects)			
Renewable energy generation	66%	66%	0%
Thermal energy generation	0%	0%	0%
Energy transmission and distribution	100%	100%	0%

5.5.3.3 Tariffs

Type ^a	T/kWh (2015 indexed)
Wind power	22.68
Solar power (with Kazakh silicon)	34.61
Solar power (with Kazakh modules)	70.00
Small hydro	32.23

T/kWh = tenge per kilowatt-hour.

Note:

^a V. Daviy. 2015. Renewable Energy in Kazakhstan. <https://www.linkedin.com/pulse/renewable-energy-kazakhstan-good-tariffs-stable-vitaliy-daviy>.

¹⁷ Reuters. 2017. AES Hands Over Kazakh Power Plants as Concession Expires. October.

As electric power transmission and distribution services in Kazakhstan belong to the sphere of natural monopolies, tariffs of the grid companies should provide compensation of costs necessary for the provision of regulated services, as well as the implementation of the investment program. The regulatory method's main drawback is the lack of incentives for cost optimization because the cost reduction leads to a reduction of the tariff in the next regulatory period.

The law to support the use of renewable energy sources was adopted on 4 July 2009, and then amended in 2013. The FIT scheme is targeted at an increase in renewable electricity generation that is in line with the targets from the green energy concept of supplying 3% of electricity from wind and solar by 2020. Renewable energy power plants are eligible for guaranteed power prices for a 15-year period.

5.5.3.4 Risk Allocation

Information of risk allocation for energy PPP projects was not available to make an assessment of a typical approach.

5.5.4 Local Capabilities

Kazakhstan has strict local content rules that oblige key players to procure goods, works, and services locally, which means that the best way of entering Kazakhstan market is to establish local presence or to find a local partner. The Government of Kazakhstan supports the cooperation of local energy companies with international financing institution.

Kazakhstan is the most advanced country in Central Asia in terms of power sector reforms. Privatization began in 1996, and all large power plants have been either privatized or transferred to investors under concessionary agreements. Kazakhstan's electricity sector is legally and financially unbundled.

State-owned electricity companies, such as the KEGOC, Kazakhstan Wholesale Electric Power Market, and Samruk-Energy, are managed by the National Wealth Fund Samruk-Kazyna. Samruk-Energy is one of the largest energy companies in Kazakhstan. Samruk-Energy operates in power generation, transmission, and distribution and coal mining, as well as in the rehabilitation, expansion, and construction of power facilities.

Electricity Generation Sector

In 2015, electricity was produced by 102 different plants, including power plants of national or regional importance or plants within industrial complexes. According to KEGOC, power plants of national importance are principally thermal power plants, and power plants of industrial and regional importance are usually combined heat and power plants.

Electricity Transmission Sector

Transmission is operated at two levels. The backbone grid in Kazakhstan is the National Power Grid providing connections between regions of the country and power systems of neighboring countries. It is managed by KEGOC. Regional electric networks provide electrical connections within regions and power transmission to retail consumers. They belong to the regional electric network companies.

Electricity Supply Sector

Power supply organizations purchase electricity directly from generators or at centralized auctions.

Other Activities in the Power Industry

Other entities play a key role in the development of the sector:

- Research and design institutes, such as KazNIPIEnergoProm, Energy KazNIPITEST, KazSelEnergoProyekt Institute, KazNIIenergetiki, and Kazakhstan Industry Development Institute, are engaged for research and development assignments in the energy sector.
- Kazakhstan Electricity Association (association of legal entities) participates in the development of the government programs, laws, and regulation, and supports its member when the interests of the industry are at stake.
- KazEnergy is a voluntary nonprofit association established to create favorable conditions for dynamic and sustainable development of oil and gas and energy industries in Kazakhstan.
- Kazakhstan Electric Capacity Reserve Pool was established by the participants of Kazakhstan electricity market to provide contract-based capacity reserves to secure uninterrupted power supply to the consumers.

5.5.5 Project Financing

PPP projects with foreign lending participation	no data
PPP projects that received export credit agency/international finance institution financing	no data

Together with Islamic Development Bank, the country established a renewable energy fund of \$50 million in 2012, which hopes to attract strategic investment flows and expertise into the renewable energy sector, particularly wind, solar, biomass, and small hydro.¹⁸

5.5.6 Challenges

Challenges of PPP progress in the energy sector are provided in Table 5.11.

¹⁸ Islamic Corporation for the Development of the Private Sector (ICD). 2012. ICD launches Central Asia Renewable Energy Fund. 10 October.

Table 5.11: Challenges of PPP Progress in the Energy Sector in Kazakhstan

Challenges	Currently Implemented Tackling Measures
Lack of state control over volume of the RES-generated Eclectic Power—The RES law does not provide a clear tool for the government to control the volumes of renewable energy investments. An unexpected success of feed-in tariff schemes may result in a situation when the state is confronted with excessive volumes of renewable energy projects.	
Transparency of bids—Issues that relate to corruption and strong vested domestic interests have been considered reasons for low levels of interest from foreign investors.	The PPP law introduced a better-defined multistage open-tender process into the concession law, but this has yet to be fully tested.
Electric power supply and inefficient transmission infrastructure—The transmission system is owned and operated by the state-owned company KEGOC; network across the country is inefficient with losses estimated at 15%. The problem of electric power supply, particularly in South Kazakhstan, remains acute.	In January 2012, a law on energy savings and energy efficiency was passed along with a comprehensive action plan that targets a 25% reduction in energy use by 2020.
Low power and heating tariffs—Power and heating tariffs are still too low to incentivize private investors to finance infrastructure upgrading of the sector.	
Resistance from some industries to green energy transition	

KEGOC = Kazakhstan Electricity Grid Operating Company, PPP = public-private partnership, RES = renewable energy sources.

Sources: Mott MacDonald; M. Karatayev and M. I. Clarke. 2015. *A Review of Current Energy Systems and Green Energy Potential in Kazakhstan*. <http://www.milesecure2050.eu/documents/publications/en/a-review-of-current-energy-systems-and-green-energy-potential-in-kazakhstan>.

5.6 Social Infrastructure

5.6.1 Regulatory Framework

5.6.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Healthcare infrastructure	100%	100%
Healthcare services	100%	100%
Education infrastructure	100%	100%

	2016	2017
Education services	100%	100%
Government buildings	100%	100%
Prisons and correction centers	100%	100%
Social housing	100%	100%
Sport and leisure facilities	100%	100%

5.6.1.2 Government Contracting Agency

Each ministry is responsible for PPP projects in its sector. Local projects would be implemented by local governments.¹⁹

- Healthcare facilities in Kazakhstan are largely owned and operated by the public sector, represented by the Ministry of Health. According to a World Health Organization report (2012), the system and policy making are highly centralized. However, healthcare provision and financing are devolved to the Oblast administration and their health departments. The 14 local governments (Oblasts) and Almaty and Astana city health departments are the key bodies responsible for providing health services and run most hospitals and clinics. Currently, for instance, while the ministry has initiated a concession on construction and operation of two multifunctional hospitals in Kazakhstan, the Akimat of Eastern Kazakhstan region is planning to build a children's hospital in Semey.

It is to be noted that the role of professional associations and nongovernment organizations in the development of health policies and regulation is increasing.

- The Ministry of Education and Science and local governments are contracting agencies for education sector projects. The ministry is responsible for the governance and intersector coordination in the fields of education, science, protection of children's rights, and youth policy, and Oblasts are responsible for the delivery of education services in schools.

Kazakhstan has embarked on reforms to improve the quality of the education system. As an example, a transition to a 12-year education system with primary and secondary levels has been announced.

- The Ministry of Internal Affairs' Committee of Criminal and Correctional System supports regional and local administration to develop correctional facilities, such as in Shymkent. Cooperation is based on allocation of the land, provision of the

¹⁹ Colibri Law Firm. 2016. PPP Projects in Kazakhstan.

infrastructure, and communication for the project. On the Shymkent correctional facility project, companies from France, Germany, and the People's Republic of China have already signified their interest.

5.6.13 Sector-Specific Regulations

Social infrastructure sector regulatory agencies in Kazakhstan as shown in Table 5.12.

Table 5.12: Social Infrastructure Sector Regulatory Agencies in Kazakhstan

Agency	Function
Ministry of Internal Affairs	Responsible for the development of the prison infrastructure regulatory framework.
Ministry of Health and Social Development	Responsible for formulating policies on key aspects of the health system and for service delivery through national clinical centers. The government has launched a healthcare development program “Densaulyk,” which aims to improve the health system. Through the Health Purchasing Committee, the Ministry of Health started to finance most hospitals in the country. Primary healthcare facilities (e.g., dispensaries, psychiatric hospitals) continue to be funded through Oblast budget.
Ministry of Education and Science	Responsible for the governance in the field of education. The National Law on Education (2007) lays down the main foundations of the education system and ratifies the administrative and financial decentralization of education institutions.

Source: Ministry of Internal Affairs, <http://mvd.gov.kz/portal/page/portal/spec/ministry>; Ministry of Health and Social Development, <http://www.government.kz/en/ministerstva/108-o-ministerstve/18702-ministry-of-health-and-social-development.html>; Ministry of Education and Science.

5.6.1.4 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Performance-based operation and maintenance contract	✗	✗
Engineering procurement and construction contract	✗	✗

5.6.2 Institutional Capacity for Implementation

5.6.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

PPP pipeline of social infrastructure projects is shown in Table 5.13.

Table 5.13: PPP Pipeline of Social Infrastructure Projects in Kazakhstan

No.	Project Name	Sector	Status	Value (\$ million)
1	Temirtau Kindergartens PPP	Education	Tendering	no data
2	Correctional facility for 1,500 people in Shymkent	Prison	Under project preparation	98
3	Multidisciplinary Hospital in Aktau	Hospital	Under project preparation	72
4	Multidisciplinary Hospital in Oskemen	Hospital	Under project preparation	60
5	Children's City Hospital in Semey	Hospital	Under project preparation	39
6	Multidisciplinary Hospital in Almaty	Hospital	Under project preparation	61
7	Karaganda University Hospital	Hospital	Under project preparation	no data
8	Astana – BOT for 4 Kindergartens	Education	Tender announced	3.6
9	Amalty – BOT for 14 Kindergartens	Education	Tender announced	1.65
10	Kyzylorda Medical center	Hospital	Tender announced	1.4
11	Aktpbe – BOT for 14 Kindergartens	Education	Tender announced	1.5
12	Zhambyl – BOT for 5 Kindergartens	Hospital	Tender announced	1.5

BOT = build-operate-transfer, PPP = public-private partnership.

Sources: PPP Centre Projects. 2017. *PPP Projects in Kazakhstan*. <http://kzppp.kz/en/%d0%b3%d1%87%d0%bf-%d0%bf%d1%80%d0%be%d0%b5%d0%ba%d1%82%d1%8b-%d0%b2-%d0%ba%d0%b0%d0%b7%d0%b0%d1%85%d1%81%d1%82%d0%b0%d0%bd%d0%b5> (accessed 15 March 2017); Asian Development Bank; PPP Center database. <http://mfa.gov.kz/files/598861291a01e.pdf> (accessed 26 February 2018).

5.6.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	5

5.6.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment			
Unsolicited bids			
Competitive bidding process	1	1	–
PPP projects currently in procurement	n/a	n/a	6

The PPP Center has identified national PPP and regional PPP projects in procurement. The majority of the projects are in education (kindergartens) and health (hospital).

One education project reached financial close in 2012, and served as a pilot for further projects in the pipeline. For further details on the Karaganda Kindergartens PPP projects which reached financial close, refer to section 5.6.3.1.

5.6.3 Features of Past PPP Projects

5.6.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	1	1	–
PPP projects that reached financial close (\$ million)	34	34	–

The Karaganda Kindergartens PPP project is involved with building, financing, and maintenance of 11 kindergarten schools in Karaganda City for a period of 14 years. The project was signed in 2011 by the regional government of the Karagandinskaya Oblast and awarded to the Turkish firm 7 Piramit.

5.6.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	1	1	–
PPP projects with foreign sponsor participation (as a share to the total number of social infrastructure PPP projects)	100%	100%	–

5.6.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	no data
Government guarantees	no data	no data	no data
Availability-/performance-based payment basis	1	1	–

5.6.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	–	–	–
Government-paid contracts	1	1	–

5.6.4 Local Capabilities

Ministries will be responsible for implementing national-level projects, whereas local facilities, such as hospitals or schools, will be developed by local governments (Oblasts).

5.6.5 Project Financing

PPP projects with foreign lending participation	no data
PPP projects that received export credit agency/international finance institution support	no data

5.6.6 Challenges

The Termitau Kindergarten PPP project appears to have stalled during the procurement process; information is not readily available to verify this.

Challenges of PPP progress in the social infrastructure sector are shown in Table 5.14.

Table 5.14: Challenges of PPP Progress in the Social Infrastructure Sector in Kazakhstan

Challenges	Currently Implemented Tackling Measures
Infrastructure conditions	
Lack of experience in social infrastructure PPP implementation	Projects in social infrastructure have been announced only recently. Except for one hospital, there is little local experience in implementing this type of project.
Regulatory framework transition	There are clear directions for the system transition both in the healthcare and education sectors, but capacity to foster greater effectiveness seems limited.

PPP = public–private partnership.

Source: Kazakh University of Economics, Finance and International Trade. 2016. *Development of Public-Private Partnership in the Republic of Kazakhstan*.

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6. PAKISTAN

Pakistan is a federation comprising four provinces as its federate units and a federal capital. The four provinces are Punjab, Sindh, Khyber Pakhtunkhwa, and Baluchistan.

Pursuant to the eighteenth constitutional amendment, which was unanimously passed by the Parliament and notified in the gazette of Pakistan on 20 April 2010, several amendments were made to the 1973 Constitution of Pakistan. These amendments redefined the structural contours of the state through a paradigm shift from a heavily centralized federation to a predominantly decentralized federation. As a result, several ministries, subjects, and functions have been transferred from the center to the provinces, allowing provinces to formulate policies and legislation in the devolve areas.

Public-private partnership (PPP)¹ regulation is one of the subjects which shifted to the provincial level. As a result, the provincial governments have the primary responsibility of developing and implementing their own PPP policies and legislation. In this regard, the provincial governments of Punjab, Sindh, and Khyber Pakhtunkhwa have initiated key developments with respect to their individual PPP jurisdictions, including:

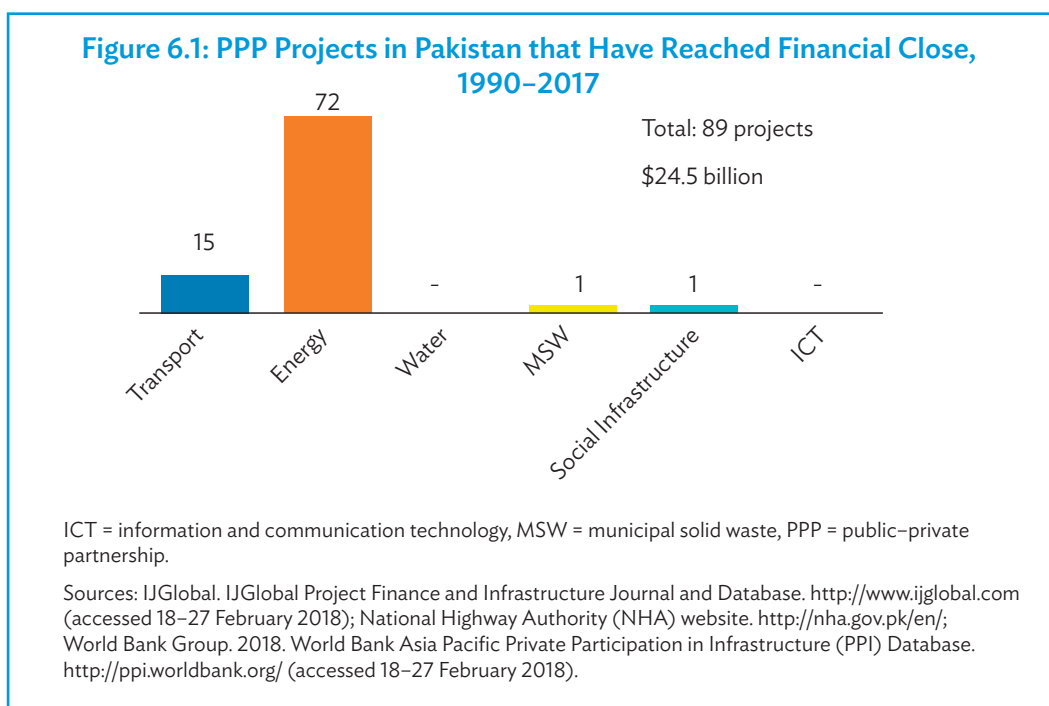
- The establishment of a PPP Policy and law in the Province of Punjab. The initiation of the Punjab PPP Cell, which has the role of supporting and developing the regulatory framework for PPPs within the province.
- The establishment of a PPP Policy and PPP law in the Province of Sindh. The Sindh PPP unit was established with the primary function of enhancing the development of PPPs in the province.
- The passing of the PPP law in Khyber Pakhtunkhwa and the development of a PPP framework in the province.

At a federal level, Pakistan did not have a PPP legislation until March 2017 when the Public Private Partnership Authority Act of 2017 (the Federal PPP Act) was passed by Parliament. Prior to the Federal PPP Act, private participation in infrastructure was propagated by the Pakistan Policy on Public Private Partnerships of 2010 (the 2010 PPP Policy). The 2010 PPP Policy detailed a set of guidelines for PPP development and the regulatory framework required to develop PPP projects. Pursuant to the 2010 PPP Policy a statutory body, i.e., the Infrastructure Project Development Facility (IPDF) was established, whose role was to coordinate and facilitate the development of PPPs within Pakistan. Subsequent to the passing of the Federal PPP Act, the PPP Authority has taken over this role from the IPDF with the intention of furthering the implementation of PPPs in the federal territory. However, at the beginning of

¹ The PPP Authority has been set up under section 3 of the Federal PPP Act.

2018, the PPP Authority was not fully operational and did not have the human and financial resources to undertake its mandate.

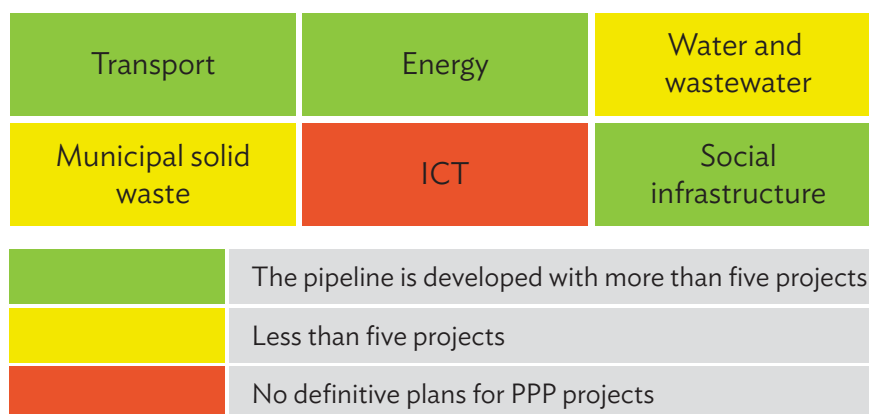
It has been observed that following the implementation of the 2010 PPP Policy, numerous transportation and renewable projects have reached financial close with an apparent slowdown in 2015, followed by the Federal PPP Act (Figure 6.1).



The different PPP sectors in Pakistan exhibit varying levels of project pipeline development. The roads sector has a relatively clear pipeline, with a few projects in preparation and a number of projects in procurement. The energy and social infrastructure sectors seem to have pipelines that are mainly in procurement, with no projects identified under preparation. The railways, ports, and airport sectors appear to have no project pipelines, with no projects under preparation or procurement (Figure 6.2).

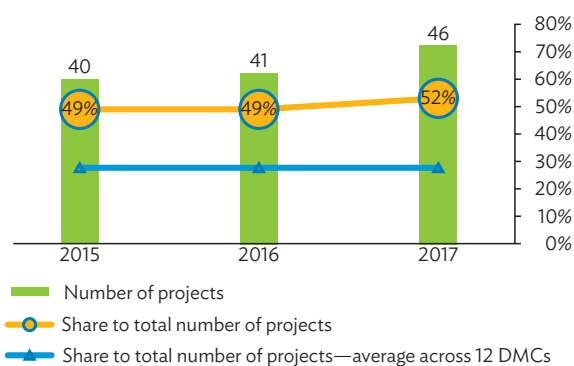
There are various challenges that are currently inhibiting the growth and development of PPPs in Pakistan:

- There has been a number of sector- and province-specific PPP laws and policies governing the development of PPP projects in Pakistan in the past. The Federal PPP Act aims to regulate and introduce good practice at a federal level. There are notable inconsistencies in the maturity of PPPs between provinces and sectors. This institutional and regulatory framework provides several legal and sector-specific risks to investors in PPP projects in Pakistan. However, the passing of the PPP Authority

Figure 6.2: Availability of PPP Pipelines in Pakistan by Sector

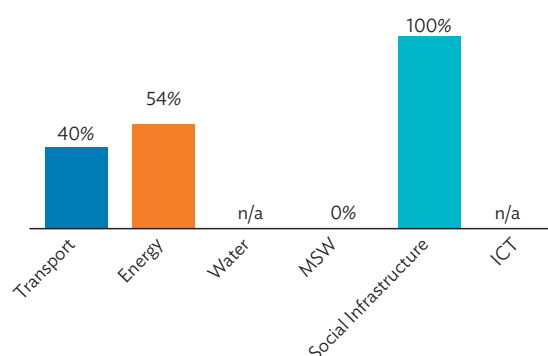
ICT = information and communication technology.

Source: Mott MacDonald.

Figure 6.3: PPP Projects in Pakistan with Foreign Sponsor Participation, 1990–2017

DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

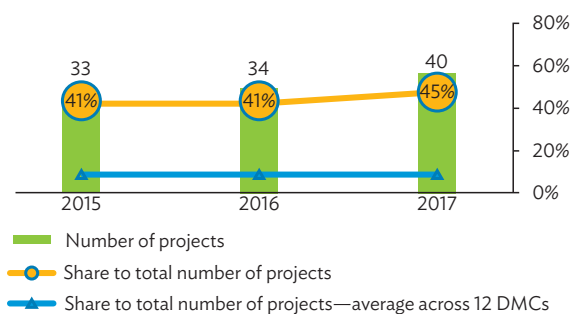
Source: Mott MacDonald.

Figure 6.4: Share of PPP Projects in Pakistan with Foreign Sponsor Participation by Sector, 1990–2017

Act at the federal level is indicative of a shift to an aligned regulatory environment within the PPP market in Pakistan.

- While to date there have not been many examples of public sector accepting commercial risks that they are better placed to manage, a commitment is being made to increase the use of provisions such as the viability gap fund (VGF) and government guarantees.

Figure 6.5: PPP Projects in Pakistan with Foreign Lender Participation, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public–private partnership.

Source: Mott MacDonald.

Figure 6.6: Share of PPP Projects in Pakistan with Foreign Lender Participation, 1990–2017

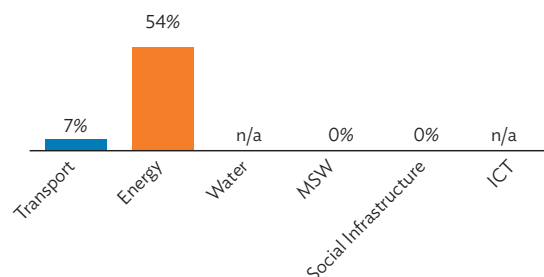
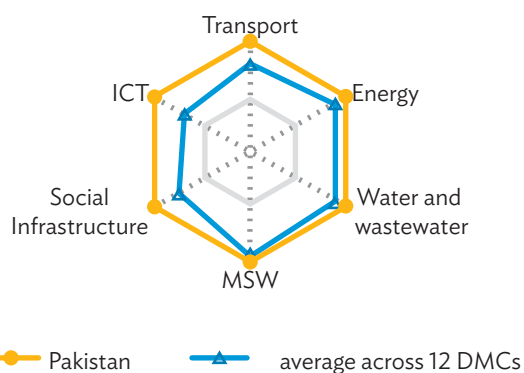


Figure 6.7: Maximum Allowed Foreign Ownership of Equity in Greenfield PPP Projects in Pakistan (%)



DMC = developing member country, MSW = municipal solid waste, PPP = public–private partnership.

Source: Mott MacDonald.

It is worth noting that the Government of Pakistan, the provincial governments, and the various PPP-supporting agencies are making a commitment toward enhancing and enabling a more attractive market for private sector involvement in PPP projects in Pakistan.

Key Developments from 2016

The most significant change from 2016 in the PPP environment in Pakistan was the introduction of the PPP Authority Act in March 2017.

6.1 Country Profile

6.1.1 Regulatory Framework

6.1.1.1 PPP Law

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

The federal government and the provincial governments of Punjab, Sindh, and Khyber Pakhtunkhwa have each passed dedicated PPP legislation in their respective jurisdictions. The provincial government of Baluchistan, however, has not established any PPP legislation to date. Accordingly, the legal framework for PPPs in the Province of Baluchistan is not entirely clear.

	1990– 2016	1990– 2017	In 2017
Number of PPP projects that reached financial close under the latest PPP law	83	89	6

Federal PPP Law

In the federal territory of Pakistan, the Federal PPP Act is applicable to PPPs. The Federal PPP Act has established the Public Private Partnership Authority² (Federal PPP Authority), which has replaced IPDF.³

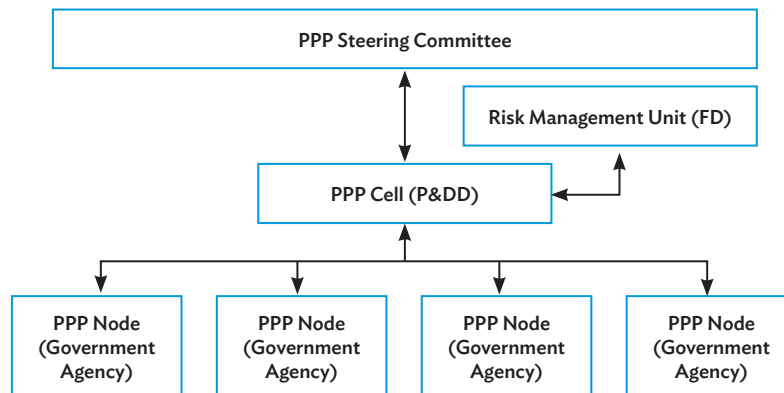
Punjab PPP Law

The PPP legal framework in Punjab is governed by the Punjab Public Private Partnership Act, 2014 (Punjab PPP Act) and the Punjab Public Private Partnership Rules, 2014 (Punjab PPP Rules). The Punjab PPP Act and Punjab PPP Rules are collectively referred to as Punjab PPP Laws.

The Punjab PPP Act repealed the Punjab Public Private Partnership Ordinance, 2014 and the Punjab Public Private Partnership for Infrastructure Act, 2010 (Punjab PPP Infrastructure Act).

² Section 3 of the Federal PPP Act.

³ A company registered under section 42 of the Companies Ordinance, 1984 (the Companies Ordinance, 1984 has been repealed and replaced by the Companies Act, 2017).

Figure 6.8: PPP Organizational Structure in Punjab

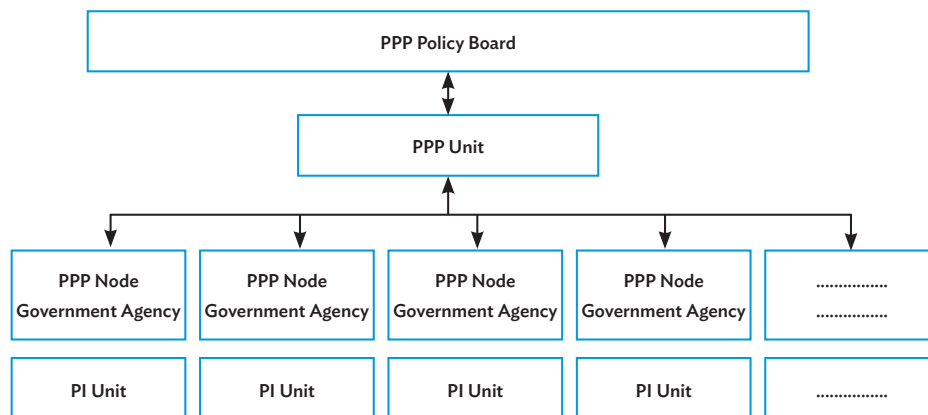
PPP = public-private partnership, FD = Finance Department, P&DD = Planning and Development Department.

Under the Punjab PPP laws, there are four identifiable entities responsible for the identification, preparation, and implementation of PPP projects, each having different roles and functions. Figure 6.8 highlights the PPP organizational structure in Punjab.

Sindh PPP Law

The PPP legal framework in Sindh is governed by the Sindh Public Private Partnership Act, 2010 (Sindh PPP Act) as amended by the Sindh Public Private Partnership (Amendment) Act, 2011 and the Sindh Public Private Partnership (Amendment) Act, 2014.

In Sindh, there are three entities responsible for the identification, preparation, and implementation of PPP projects, each having different roles and functions. Figure 6.9 highlights the PPP organizational structure in Sindh.

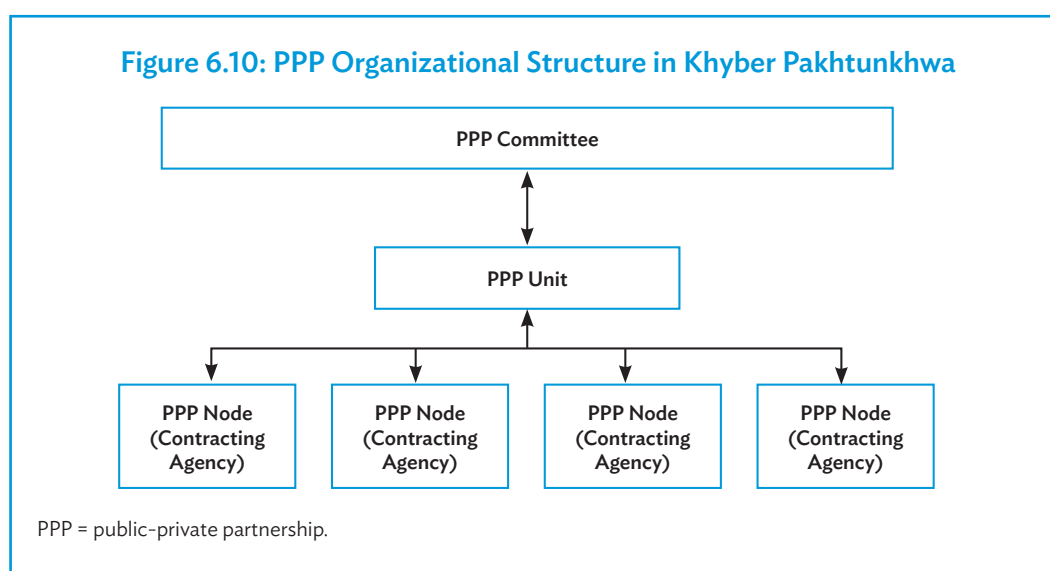
Figure 6.9: PPP Organizational Structure in Sindh

PPP = public-private partnership, PI = project implementation.

Khyber Pakhtunkhwa PPP Law

The PPP legal framework in Khyber Pakhtunkhwa is governed by the Khyber Pakhtunkhwa Public Private Partnership Act, 2014 (KPK PPP Act) as amended by the Khyber Pakhtunkhwa Public Private Partnership (Amendment) Act, 2016.

In Khyber Pakhtunkhwa, there are three entities responsible for the identification, preparation, and implementation of PPP projects, each having different roles and functions. Figure 6.10 highlights the PPP organizational structure in Khyber Pakhtunkhwa.



Baluchistan PPP Law

- Baluchistan has not yet developed a provincial PPP legal framework. Furthermore, the Federal PPP Act does not extend to Baluchistan for the reason that the Federal PPP Act defines PPPs as a commercial transaction between an “Implementing Agency”⁴ and a “Private Party.” Accordingly, Baluchistan, being a provincial government, does not fall within the scope of an implementing agency.

6.1.1.2 PPP Types

	2016	2017
Number of PPP types defined in the PPP regulations	11	11

⁴ The term “Implementing Agency” has been defined under the Federal PPP Act as any of the line ministries, attached departments, body corporate, autonomous body of the federal government, or any organization or corporation owned or controlled by the federal government.

The following types of PPP arrangements have been defined in the PPP laws (Table 6.1):

Table 6.1: PPP Types in Pakistan

Federal PPP Act	Punjab PPP Act	Sindh PPP Act	KPK PPP Act
No specific provision(s) under the Federal PPP Act.	Build-Transfer; Build-Lease-Transfer; Build-Operate-Transfer; Build-Own-Operate; Build-Own-Operate-Transfer; Build-Transfer-Operate; Contract-Add-Operate; Develop-Operate-Transfer; Joint Venture; Management Contract; Rehabilitate-Operate-Transfer; Rehabilitate-Own-Operate; and Service Contract. ^b	Build-Operate-Transfer; Design-Build-Finance-Operate; and Any other variant of PPP. ^a Additionally, the following modes identified in Part IV of the Sindh Public Procurement Rules, 2010 (Sindh Public Procurement Rules): Service Contract; Management Contract; Lease Contract; Build-Own-Operate; Build-Own-Operate, Transfer; Build-Lease-Transfer; Build-Transfer; Rehabilitate-Operate-Transfer; and Any combination or variation of the above modes or any other arrangement under PPP mode approved by the Sindh Public Procurement Regulatory Authority. ^c	Build-Operate-Transfer; Build-Own-Operate-Transfer; Design-Build-Finance-Operate; and Any other variant of PPP. ^d

Notes:

^a Detailed in the Second Schedule to the Punjab PPP Act.

^b Section 2(f) of the Sindh PPP Act.

^c Rule 81 (2) of the Sindh Public Procurement Rules.

^d Section 2(e) of the KPK PPP Act.

6.1.1.3 Eligible Sectors

	2016	2017		2016	2017
Transport			Energy		
Roads	✓	✓	Power generation	✓	✓
Railways	✓	✓	Power transmission	✓	✓
Ports	✓	✓	Power distribution	✓	✓
Airports	✓	✓	Oil and gas	✓	✓
Water and wastewater	✓	✓	Information and communication technology	✓	✓
Municipal solid waste	✓	✓	Social infrastructure	✓	✓

The Pakistan policy on PPPs and the provincial PPP policies lay out a broad range of eligibility criteria for PPP infrastructure facilities, including:

- transport and logistics including federal, provincial and municipal roads, rail, seaports, airports, fishing harbors as well as warehousing, wholesale markets, slaughterhouses, and cold storage;
- mass urban public transport including integrated bus systems as well as intracity and intercity rail systems;
- local government services including water supply and sanitation, solid waste management, low-cost housing, and healthcare and/or education and skills development facilities;
- energy projects including hydroelectric and captive power generation project, hydro and thermal power generation projects;
- tourism projects including cultural centers, entertainment and recreational facilities, and other tourism-related infrastructure;
- industrial projects including industrial parks, special economic zones, and related projects;
- irrigation projects, some of these combined with power generation; and
- social infrastructure which includes education, culture, and health infrastructure.

6.1.1.4 Other Applicable Restrictions

	2016	2017
Project funding structure	no data	no data
Project capital investment size	no data	no data

6.1.1.5 Unsolicited Bids

	2016	2017
Acceptance of unsolicited proposals	✓	✓
Eligibility of the project proponent to have:		
Competitive advantage at bid evaluation	✓	✓
Swiss challenge	✗	✗
Compensation of the project development cost	✗	✗
Government support for land acquisition and resettlement cost	no data	no data
Government support in the form of viability gap fund and guarantees	✓	✓

Although unsolicited proposals are not expressly prohibited in Pakistan under the Federal PPP Law, they are not preferred by the federal government due to potential issues relating to lack of transparency and unequal treatment of bidders. Currently, there are no procedures for the federal government to receive and process an unsolicited proposal.

However, in Pakistan, some provinces (e.g., Sindh and Punjab) have adopted their own practices when dealing with an unsolicited proposal. With regard to project development cost, in the Province of Punjab, for example, the project proponent shall be reimbursed costs for preparing and submitting an unsolicited proposal. In the event the proponent fails to be adjudged as the best evaluated bidder, the cost of preparation of the unsolicited proposal shall be determined by the government authority. There is no such reference found with regard to the treatment of project development cost under Federal PPP Laws.

Various considerations are applicable with respect to unsolicited proposals, including being able to demonstrate innovation, reasoned analysis, a match to the requirements of the country, and a project's likely inability to be procured through an alternative method. The federal government may decide if various unsolicited proposals require competitive bidding during the project procurement. The provincial framework allows for certain benefits to be awarded to the proponent of the unsolicited proposal during the competitive bidding process. These include exemption from prequalification, additional weightage of points during the evaluation process, and a right of first refusal.

The Pakistan policy on PPPs highlights the process for unsolicited proposals:

- The private sector identifies a potential project.
- The private sector seeks guidance from the federal government of the framework for unsolicited bids and discusses this project with the authority to ensure that it is suitable for consideration.
- A private sector entity prepares its own feasibility study of the proposal.
- A private sector entity submits study and proposal to federal government.

- Federal government appraises project and
 - accepts project; or
 - requires more information on, or changes to, the project; or
 - rejects bid outright due to various conditions not met.
- Federal government proceeds or not, according to its rules and regulations.

6.1.1.6 Institutional PPPs

	2016	2017
Are institutional PPP arrangements allowed (e.g., joint venture between government or state-owned enterprises and private firms as a special purpose vehicle company)?	✓	✓

	1990– 2016	1990– 2017	In 2017
Institutional PPP projects (number)	2	2	-
Institutional PPP projects (as a share to the total number of PPP projects)	2%	2%	-

The Pakistan Companies Act of 2017 (Companies Act) does not place any restriction on the arrangements pertaining to the entities that participate in a project company.

The Federal PPP Act does not prohibit the federal government from entering into a joint venture arrangement with a private sector entity and states that a private party shall “with or without the participation of an Implementing Agency”⁵ incorporate a special purpose vehicle (SPV) for the purposes of undertaking the project.⁶

The Pakistan policy on PPPs expressly states that a PPP may include an equity joint venture between the federal government and the private sector, and the PPPs may be wholly privately owned or be a joint venture with the public sector.

The definition of a “Public Private Partnership” under the Punjab PPP Act contemplates the arrangement between the government agency⁷ and a private party for the purposes of undertaking a PPP. However, under the Punjab PPP Act, a private party shall not be a government agency, i.e., connected to the Government of Punjab, but does not restrict the federal government, or the governments of other provinces or organizations owned or affiliated

⁵ The Federal PPP Act defines an Implementing Agency as “any of the line ministries, attached departments, body corporate, autonomous body of the Federal Government or any organization or corporation owned by the Federal Government.”

⁶ Section 16(1) of the Federal PPP Act.

⁷ The Punjab PPP Act defines a Government Agency as “a department, attached department of the Government [of Punjab], a local government, or a body corporate owned or controlled by the Government [of Punjab] or a local government.”

with the federal government or the governments of other provinces from entering into PPP arrangements with the Government of Punjab. Furthermore, the Punjab PPP Act specifically sets out the types of PPP arrangements including the “Joint Venture” model, whereby, a government agency and the private sector entity make equity contributions and pool their resources toward project development and implementation by forming an SPV (joint venture company) or assuming joint ownership of an existing company through the purchase of shares.

The Sindh PPP Act defines a “Public Private Partnership” as “a partnership carried out under a Public–Private Partnership Agreement between the public sector represented by an Agency⁸ and a private party for the provision of an infrastructure facility, management functions and/or service with a clear allocation of risks between the two parties.” Like the Punjab PPP Act, the definition of “Private Party” under the Sindh PPP Act excludes an agency. However, the Sindh PPP Act does not restrict federal government, or the governments of other provinces or organizations owned or affiliated with the federal government or the governments of other provinces, from entering into PPP arrangements with the Government of Sindh. The Sindh PPP Act does not restrict the undertaking of a joint venture arrangement between a private sector entity and an agency for the purposes of setting up a jointly owned SPV to undertake the PPP.

The Sindh PPP Policy sets out the various categories of PPPs that may be implemented in Sindh. The policy expressly provides for the “Joint Venture” model as a form of PPP in which an SPV is co-owned and operated by the public and private sector partners. The policy, however, goes on to state that the government’s dual role as the regulator and a part owner may result in a conflict of interest as a potential disadvantage of the “Joint Venture” model.

The KPK PPP Act, similar to the Punjab PPP Act and the Sindh PPP Act, restricts the Government of Khyber Pakhtunkhwa from entering into a PPP arrangement with itself as the counterparty. However, the KPK PPP Act does not restrict federal government or the governments of other provinces or organizations owned or affiliated with the federal government or the governments of other provinces, from entering into PPP arrangements with the Government of Khyber Pakhtunkhwa. The KPK PPP Act does not restrict the undertaking of a joint venture arrangement between a private sector entity and a contracting authority⁹ for the purposes of setting up a jointly owned SPV to undertake the PPP.

6.1.1.7 Land Rights

	2016	2017
Which of the following is permitted to the private partner:		
Transfer land lease/use/ownership rights to third party	✓	✓

⁸ The Sindh PPP Act defines an Agency as “department, attached department, body corporate, autonomous body of the Government [of Sindh], local government, or any organization or corporation owned or controlled by the Government [Sindh] or local government.”

⁹ The KPK PPP Act defines a Contracting Authority as “a department, attached department, a body corporate, autonomous body of the Government [of Khyber Pakhtunkhwa], local government, or any organization or corporation owned or controlled by the Government [Khyber Pakhtunkhwa] or local government.”

	2016	2017
Use leased/owned land as collateral	✓	✓
Mortgage leased/owned land	✓	✓
Is there a legal mechanism for granting wayleave rights, for example, laying water pipes or fiber cables over land occupied by persons other than the government or the private partner?	no data	no data
Is there a land registry/cadastre with public information on land plots? ^a	✓	✓
Which of the following information on land plots is available to the private partner:^b		
Appraisal of land value	✓	✓
Landowners	✓	✓
Land boundaries	✓	✓
Utility connections	✓	✓
Immovable property on land	✓	✓
Plots classification	✓	✓

Notes:

^a Punjab Land Records Authority; Board of Revenue, Government of Sindh.

^b Punjab Land Records Authority; Board of Revenue, Government of Sindh.

The numerous land laws in Pakistan are central to the PPP transaction and are relevant for local and foreign users or owners of land. For PPP arrangements in Pakistan involving a contractual arrangement between public (national, state, provincial, or local) and private entities, this section will focus on the various rights pertaining to land.

The key regulations governing land in Pakistan are as follows:

- The Transfer of Property Act, 1882;
- The Land Acquisition Act, 1894;
- The Registration Act, 1908;
- The Stamp Act, 1899;
- The Easements Act, 1882;
- Punjab Land Records Authority Act, 2017;
- The Colonization of Government Lands (Punjab) Act, 1912;
- The Colonization of Government Lands Act, 1912 (in its application to the Province of Sindh);¹⁰ and
- The Land Revenue Act, 1967.

¹⁰ As amended by (i) the Colonization of Government Lands (Amendment) Act 2009, (ii) the Colonization of Government Lands (Amendment) Act 2010, and (iii) the Colonization of Government Lands (Sindh Amendment) Act 1996.

Various portions of land in Pakistan belong to the state. State-owned land in Pakistan may be leased, granted, or assigned to individuals or corporations for various purposes. In most cases where state land is used by non-state entities, the land remains in the possession of the state with rent payable from the tenants to the state, such as in a leasing arrangement where such land is leased out to private developers on the terms stipulated in the lease. The regulatory environment in Pakistan provides the procuring authority the ability to make available the necessary land or right-of-way to PPP project companies for the development of PPP projects.¹¹ The rights, terms, and conditions pertaining to land are determined on a case-to-case basis.

The land acquisition options include the following:

- (i) **An acquisition of the land by the provincial government (whether voluntary or compulsory), such land being sold or leased thereafter to the private developer.¹²**

Where, the provincial government acquires land, pursuant to the Land Acquisition Act in any locality that is likely to be needed for public purpose or for a company, it shall require the company to enter into an agreement with the provincial government,¹³ and the land can only be utilized for the purposes specified in the agreement with the provincial government for the purchase of land. Section 43-A of the Land Acquisition Act provides that no company for which any land is acquired shall be entitled to transfer the said land or any part thereof by sale, mortgage, gift, lease, or otherwise except with the previous sanction of the provincial government.¹⁴

Furthermore, in case a private partner, being a tenant under the Colonization of Government Lands Act, holding land in an area owned by the Government of Punjab,¹⁵ shall not, pursuant to section 19 of the Colonization of Government Lands Act, transfer or charge by any sale exchange, gift, will, mortgage, or other private contract, other than a sublease¹⁶ any rights or interests vesting in the tenant under the Colonization of Government Lands Act, without the

¹¹ United Nations Human Settlements Programme. 2012. Pakistan Settlements Flood Recover Project: A Guide on Land and Property Rights in Pakistan. Islamabad. <http://www.ndma.gov.pk/Publications/A%20Guide%20on%20Land%20and%20Property%20Rights%20in%20Pakistan%202012.pdf> (accessed 23/02/2018); World Bank Group. Benchmarking Public Procurement. <http://bpp.worldbank.org/data/exploreindicators/PPP-procurement>.

¹² Pursuant to the Land Acquisition Act.

¹³ Section 41 of the Land Acquisition Act.

¹⁴ In the case of Shahzada Khurram Nazir and others versus Province of Punjab PLD 2011 Lahore 276, provides that section 43-A of the Land Acquisition Act does not prohibit the transfer of the acquired land by a company to a third party, but merely requires that the same should be done with the permission and consent of the Provincial Government.

¹⁵ The Government of Punjab has issued a statement of conditions vide notification no. 90(S)-2016/1669-CS (III) dated 30 December, 2016 for land allocation and land lease for solar power projects and a statement of conditions vide notification no. 464-2016/213-CS(III) dated 1 March 2016 for the grant of state land for power projects other than solar power projects. The Government of Sindh has issued a statement of conditions vide notification no. 09-294-03/SO-I/306 dated 9 May 2012 for grant of state land on lease for producing alternative energy through construction of wind mills. Area owned by the Government of Sindh, in case of the Colonization of Government Lands Act, 1912 (in its application to the Province of Sindh).

¹⁶ For not more than 1 year in the case of a tenant who has not acquired a right of occupancy, and 7 years in the case of a tenant who has acquired a right of occupancy.

consent in writing of the commissioner appointed by the Board of Revenue of the Revenue Department of Government of Punjab.¹⁷

For the purposes of using leased and/or owned land as collateral, the right to use land for the purposes of creating a security varies in terms of the PPP laws in the respective provinces.¹⁸

At the federal level, the private party shall not create any lien, charge, or encumbrance, in favor of the lenders, over the immovable properties as collateral, except with the prior approval of the board of the Federal PPP Authority,¹⁹ the financing of a PPP project in other provinces is dependent upon the terms and conditions determined by the parties to the PPP agreement,²⁰ or may be subject to any restriction that may be contained in the concession contract²¹ to create security interests over any of its assets, rights, or interests, including those relating to the infrastructure project to secure any financing for the project.

(ii) Voluntary acquisition of the land by the private developer or partner.²²

A private developer can freely acquire land through sale/purchase and the immovable property can be transferred to a purchaser via a registered instrument.²³

In case the land is privately acquired for the project, then, subject to the municipal and other regulatory restrictions or consents pertaining to a PPP project, the owner of the land is free to utilize and transfer the land as it wishes.²⁴

Where the land is leased, then, such land would be subject to the terms specified in the lease agreement, and the land can be used for a specific term which would be specified in the lease agreement. The term of the lease should ideally match the life of the project.²⁵

The Transfer of Property Act (TPA) allows for the creation of a charge over immovable property, where either by the act of the parties to the PPP arrangement or by operation of law whereby the immovable property is made security for the payment of money to another and the transaction does not amount to a mortgage.²⁶

¹⁷ Please note that, under section 10 of the Colonization of Government Lands Act and the Colonization of Government Lands Act, 1912 (in its application to the Province of Sindh), the provincial government may issue a statement of conditions upon which it is willing to grant land in a colony to tenants.

¹⁸ However, we note that there is no specific provision under the Punjab PPP Act pertaining to the creating of a security on an immovable property.

¹⁹ Section 21(1) of the Federal PPP Act.

²⁰ Section 21 (v) of the Sindh PPP Act (as amended by the Sindh Public Private Partnership (Amendment) Act, 2014).

²¹ Section 45 of the KPK PPP Act.

²² Pursuant to section 54 of the TPA.

²³ Section 54 of the TPA and section 17(1) (b) of the Registration Act.

²⁴ However, any such acquisition of land would be subject to the procedural requirement set out in section 54 of the TPA, section 17 of the Registration Act and payment of the appropriate stamp duty pursuant to Article 23 of Schedule I of the Stamp Act.

²⁵ We note that, pursuant to section 109 of the TPA, where a company transfers a property leased to a third party, called the transferee, in the absence of a contract to the contrary, the transferee shall possess all the rights, and if the lessee so elects, be subject to all the liabilities of the company as to the property or part transferred so long as the company is the owner of it.

²⁶ Section 100 of the TPA.

Moreover, a company may mortgage its acquired land through a mortgage deed. Mortgages, under the TPA, can be made of a specific immovable property for the purpose of securing the payment of money advanced or to be advanced by way of loan, an existing or future debt or the performance of an engagement which may give rise to a pecuniary liability.²⁷

Acquisition of Land by a Foreigner

In relation to the ownership of land, in terms of Order No. 18/152/84-Poll.E(II) dated 9 September 1984 issued by the Ministry of Interior, the federal government in exercise of its powers under the Foreigner Act, 1946 (Foreigner Act) has ordered that no foreigner shall, directly or indirectly, acquire land or any interest in land or landed property in Pakistan except with the previous permission of the federal government or of the provincial government.²⁸

In addition to the above, the Home Department, Government of Sindh, in terms of its notification dated 1 November 2009, directed that that no lease, rent, or sale of any plot of land or property shall be made in favor of foreign nationals in the Province of Sindh, without seeking the prior approval of the Home Department, Government of Sindh.

In practice, we are not aware of the above restrictions being applied to ownership of land by companies incorporated in Pakistan, even where such companies are owned or controlled by foreign investors.

Protections Provided Under the Constitution and the Protection of Economic Reforms Act, 1992 (Reforms Act):

Although fundamental right to acquire or dispose of the property, as provided in Article 23 of the Constitution,²⁹ is not available to a foreigner, however, Article 24 of the Constitution, among other things, provides that no person shall be compulsorily deprived of his property save in accordance with law, and no property shall be compulsorily acquired or taken possession of, save for a public purpose and save by the authority of law which provides for compensation therefor. Protection provided by Article 24 is available not only to a citizen but also to a foreigner, whether a natural person or an artificial person.³⁰

Sections 7 and 8 of the Reforms Act provide statutory protection against compulsory acquisition of ownership, management, and control of any enterprise transferred by the federal government to citizens as well as foreigners.

Grant of Wayleave Rights

²⁷ Section 58 (a) of the TPA.

²⁸ Permission from the federal government or respective provincial government may be granted on a routine basis as part of the approval process for the relevant PPP project.

²⁹ Article 23 of the Constitution provides that every citizen shall have the right to acquire, hold, and dispose of property in any part of Pakistan, subject to the Constitution and any reasonable restrictions imposed by law in the public interest. This right per se is not available to persons who are not citizens of Pakistan.

³⁰ In the case of *Malik Gul Hassan & Co. versus Federation of Pakistan*, the Quetta High Court held that no person, whether a citizen or a foreigner, whether natural or artificial (i.e., a firm or a corporation), shall be deprived of property otherwise than in accordance with law.

Where in Punjab and Sindh, the private partner shall be granted the right-of-way for the implementation of the project by way of government support,³¹ the KPK PPP Act prescribes that the private partner, on the request of the contracting authority,³² under the terms of the law and the concession contract, shall be assisted to enjoy the right to enter upon, transit through, or do work or fix installations upon property of third parties, as appropriate and required for the implementation of the project.³³ In Khyber Pakhtunkhwa, any compulsory acquisition of land for a project is carried out in accordance with the Land Acquisition Act.³⁴

In case the private partner purchases land, a right-of-way may be granted, pursuant to section 4 of the Easements Act, to the private partner as an owner or occupier of the said land, for the beneficial enjoyment of that land, to do and continue to do something, or to prevent and continue to prevent something being done, in or upon, or in respect of, certain other land not his own.³⁵ Beneficial enjoyment includes possible convenience, remote advantage, and a mere amenity.³⁶

Land Registry with Public Information on Land Plots

In Pakistan, land matters are administered by the Revenue Department of each provincial government. A Revenue Department of a respective provincial government comprises of several officers/officials including a Provincial Board of Revenue that overlooks any matters relating to or arising out of land, including the maintenance of a record-of-rights for each province.³⁷

In case of transfer of property through sale, pursuant to the TPA, to confirm the right and title of the transferor in the property, the transferee or its counsel must review of the transferor ownership documents and verify title to property, and also visit the respective land department for verification of the information, records, and transferor ownership documents in respect of the property. Therefore, by reviewing the transferor's ownership documents, information on the subject land shall be made available to the transferee or its counsel.

³¹ All forms of government support are subject to approval of the PPP steering committee in Punjab and the PPP policy board in Sindh.

³² Section 2 (e) of the KPK PPP Act defines "Contracting Authority" to mean "a department, attached department, a body corporate, autonomous body of the Government of Khyber Pakhtunkhwa, local government, or any organization, or corporation owned or controlled by the Government of Khyber Pakhtunkhwa or local government."

³³ Section 43 (1) of the KPK PPP Act.

³⁴ Section 42 of the KPK PPP Act.

³⁵ However, pursuant to the Easements Act, an easement may also be acquired or transferred in the following ways:
 (i) an easement may be acquired through an agreement and would be, therefore, subject to the provisions of the respective agreement;
 (ii) where a right of easement is attached to a property transferred, by act of the parties, or operation of law, the transfer, unless a contrary intention appears, be deemed to pass the easement to the person in whose favor the transfer takes place;
 (iii) where an easement is apparent and continuous and necessary for enjoying the transferred property, the transferee shall, unless a different intention is expressed or necessarily implied, be entitled to such easement; or
 (iv) an easement may also be acquired in virtue of a local custom in the form of customary easements.

³⁶ Section 4 of the Easements Act.

³⁷ Section 39 of the Punjab Land Revenue Act, 1967 and the Sindh Land Revenue Act, 1967 prescribe the information that a record-of-rights for an estate shall include. Furthermore, in Punjab, as per section 5 (b) of the Punjab Land Records Authority Act (PLRAA), the Government shall, by notification, establish an Authority to be called the Punjab Land Records Authority that shall to manage, update, and maintain land records.

6.1.1.8 Environmental and Social Issues

	2016	2017
Is there a local regulation establishing a process for environmental impact assessment?	✓	✓
Is there a legal mechanism for the private partner to limit environmental liability for what is outside of its control or caused by third parties?	no data	no data
Is there a local regulation establishing a process for social impact assessment?	×	×
Is there involuntary land clearance for PPP projects?	no data	no data

Local Regulation for Initial Environmental Examination and Environmental Impact Assessment

The Pakistan Environmental Protection Act, 1997 (Federal EPA) is the principal environmental legislation in Pakistan. In all four provinces and at a federal level, environmental protection agencies were established under the provision of the federal EPA.

The environmental protection agencies carry out initial environmental examination (IEE) and environmental impact assessment (EIA) in their respective jurisdictions. The environmental protection agencies are as follows:

- (i) Pakistan Environmental Protection Agency,
- (ii) Punjab Environmental Protection Agency,
- (iii) Sindh Environmental Protection Agency,
- (iv) Khyber Pakhtunkhwa Environmental Protection Agency, and
- (v) Baluchistan Environmental Protection Agency.

At a federal level and for the provinces of Punjab, Khyber Pakhtunkhwa, and Baluchistan, the process of applying for and obtaining the IEE and EIA is regulated under the Pakistan Environmental Protection Agency (Review of IEE and EIA) Regulations, 2000 (IEE and EIA Regulations). A brief summary regarding the requirements for IEE and EIA approvals is as follows:

(i) Initial Environmental Examination

Under the Federal EPA and concurring provincial laws, no proponent of a project can commence construction or operation unless

- (i) the proponent has filed with the relevant environmental protection agency an IEE; or
- (ii) where the project is likely to cause an adverse environmental effect, an EIA has been conducted and an approval conducted in respect thereof.

An IEE essentially involves a preliminary environmental review of the reasonably foreseeable qualitative and quantitative impacts on the environment of a proposed project to determine whether it is likely to cause an “adverse environmental effect” for requiring preparation of an EIA.

(ii) Environmental Impact Assessment Approvals

An EIA requires an environmental study comprising collection of data; prediction of qualitative and quantitative impacts; comparison of alternatives; evaluation of preventive, mitigatory, and compensatory measures; formulation of environmental management and training plans and monitoring arrangements; framing of recommendations; and such other components as may be prescribed in rules.

Upon receipt of the EIA approval from the relevant environmental protection agency and before commencing construction of the project, the proponent is required to provide an undertaking acknowledging acceptance of the terms of the EIA approval. Thereafter and prior to operation of the project, the proponent has to submit an Environmental Management Plan and request for a confirmation from the relevant environmental protection agency of compliance with the conditions of the EIA approval. Upon receipt of such confirmation, the project company can commence operations.

In the Province of Sindh, IEE and EIA approvals are regulated under the Sindh Environmental Protection Agency (Review of Initial Environmental Examination and Environmental Impact Assessment) Regulations, 2014 (Sindh IEE and EIA Regulations). However, the requirements in the Sindh IEE and EIA Regulations mirror the requirements of the IEE and EIA Regulations, as summarized above.

Local Regulation for Social Impact Assessments

There is no local regulation for social impact assessments (SIAs) in Pakistan. In the Province of Punjab, however, to assess the social consequences of PPP projects, guidelines have been issued by the Public Private Partnership Cell, Planning and Development Department, Government of the Punjab (collectively referred to as Punjab SIA Guidelines).

Under the Punjab SIA Guidelines, SIAs can be undertaken as part of an environmental assessment process or independently, if required for better assessment of the social consequences, both positive and negative, of implementing a PPP project. However, no process has been defined for PPPs to apply for SIA and neither has a regulator been identified for carrying out the SIA.

Other than Punjab, in all other provinces and at a federal level, no such guidelines have been developed.

However, it has been observed that both Sindh and Punjab apply the Environmental and Social Management System when implementing PPP projects.

6.1.1.9 Foreign Investor Participation Restrictions

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Transport			Energy		
Roads	100%	100%	Power generation	100%	100%
Railways	100%	100%	Power transmission	100%	100%
Ports	100%	100%	Power distribution	100%	100%
Airports	100%	100%	Oil and gas	100%	100%
Water and wastewater			Municipal solid waste	100%	100%
Bulk water supply and treatment	100%	100%	Social infrastructure		
Water distribution	100%	100%	Healthcare infrastructure	100%	100%
Wastewater treatment	100%	100%	Healthcare services	100%	100%
Wastewater collection	100%	100%	Education infrastructure	100%	100%
Information and communication technology	100%	100%	Education services	100%	100%
Fixed line infrastructure	100%	100%	Government buildings	100%	100%
Fixed line services	100%	100%	Prisons and correction centers	100%	100%
Wireless/mobile infrastructure	100%	100%	Social housing	100%	100%
Wireless/mobile services	100%	100%	Sport and leisure facilities	100%	100%

Note: Prime Minister's Secretariat, Board of Investment. 2013. *Investment Policy 2013*. Pakistan.

As per the Pakistan Investment Policy 2013 (Investment Policy), all sectors and activities are open for foreign investment unless specifically prohibited or restricted for reasons of national security and public safety. Specified restricted industries include arms and ammunitions; high explosives; radioactive substances; securities, currency, and mint; and consumable alcohol.

There is no upper limit on the share of foreign equity allowed, except in specific sectors including airline, banking, agriculture, and media. For corporate agriculture farming, foreign investors are allowed to hold 100% equity.

Foreign investors are restricted from holding Pakistani securities without the prior general or special permission of the State Bank of Pakistan (SBP). Under the Foreign Exchange Manual, 2017 (FE Manual) general permission or exemption has been granted by the SBP to foreign nationals and firms (including partnerships), trusts, and mutual funds registered outside Pakistan, subject to certain conditions. There are no restrictions on the purchase price paid to a nonresident shareholder already holding Pakistani securities in accordance with the general or special permission of the SBP. However, such general permission is not available for entities owned or controlled by a foreign government, which require the prior written permission of the SBP.

Foreigners holding Pakistani securities in accordance with the general or special permission of the SBP are entitled to repatriation of dividends and disinvestment proceeds net of Pakistan tax liability. Remittance of disinvestment proceeds exceeding the break-up value of the shares, as certified by a practicing chartered accountant in Pakistan, requires the prior written permission of the SBP.

Is there any restriction for foreign investors on?	2016	2017
Land use/ownership rights as opposed to similar rights of local investors	no	no
Currency conversion	no	no

Pursuant to the Foreigner Act, the federal government has ordered that no foreigner shall, directly or indirectly, acquire land or any interest in land or landed property in Pakistan, except with the previous permission of the federal government or of the provincial government. Permission from the federal government or respective provincial government may be granted on a routine basis as part of the approval process for the relevant PPP project. By way of established practice, the above restriction has not been applied to ownership of land by companies incorporated in Pakistan, even where such companies are owned or controlled by foreign investors.

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	41	46	5
PPP projects with foreign sponsor participation (as a share to the total number of PPP projects)	49%	52%	83%

6.1.1.10 Dispute Resolution and Enforcement Mechanism

	2016	2017
Can a foreign law be chosen to govern PPP contracts?	no data	✓
What dispute resolution mechanisms are available for PPP agreements?		
Court litigation	no data	✓
Local arbitration	✓	✓
International arbitration	✓	✓
Has the country signed New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?	✓	✓

General Pakistan Law Overview

The Pakistani courts have held that, under Pakistan law, the parties to a contract are free to contractually agree to resolve disputes among them in accordance with the laws of a country other than Pakistan.³⁸ As to foreign jurisdiction clauses, the Pakistani courts have held that foreign jurisdiction clauses are valid under Pakistan law; however, the jurisdiction provision will not be construed as ousting the jurisdiction of the Pakistani courts but will be dealt with in the same manner as an arbitration clause in the event of legal proceedings being instituted in a court in Pakistan.³⁹ Accordingly, in the event any legal proceedings are instituted by a party in Pakistan, even when the contract is governed by the laws of a foreign country, the other party against whom the legal proceedings have been instituted can apply for stay of the proceedings in terms of section 34 of the Pakistan Arbitration Act, 1940 (Arbitration Act).⁴⁰

Federal PPP Act

Section 15(3) of the Federal PPP Act provides that the PPP agreement shall be governed, construed, and interpreted in accordance with the laws of Pakistan, unless otherwise provided in the PPP agreement. Therefore, foreign governing law may be chosen to govern a particular PPP agreement, subject to mutual agreement.

³⁸ Pakistan Insurance Corporation versus British India Steam Navigation Co. Ltd. PLJ 1974 Karachi 147.

³⁹ M.A. Chowdhury versus Mitsui O.S.K. Lines Ltd. and others. PLD 1970 Supreme Court 373.

⁴⁰ Section 34 of the Arbitration Act is reproduced here:

“34. Power to stay legal proceedings where there is an arbitration agreement. Where any party to an arbitration agreement or any person claiming under him commences any legal proceedings against any other party to the agreement or any person claiming under him in respect of any matter agreed to be referred, any party to such legal proceedings, may at any time before filing a written statement or taking any other steps in the proceedings, apply to the judicial authority before which the proceedings are pending to stay the proceedings; and if satisfied that there is no sufficient reason why the matter should not be referred in accordance with the arbitration agreement and that the applicable was, at the time when the proceedings were commenced, and still remains, ready and willing to do all things necessary for the proper conduct of arbitration, such authority may make an order staying the proceedings.”

Punjab PPP Laws

Choice of governing law is not directly addressed in the Punjab PPP laws. However, section 25 of the Punjab PPP Act provides that disputes shall be decided in accordance with the laws of Pakistan, or under any other law as may be specified in the PPP agreement. Therefore, foreign governing law may be chosen to govern a particular PPP agreement, subject to mutual agreement.

Sindh PPP Act

Choice of governing law is not directly addressed in the Sindh PPP Act. However, section 27(2) of the Sindh PPP Act provides that disputes shall be decided in accordance with the law in force in Pakistan. It is not clear whether the intention of section 27(2) of the Sindh PPP Act is to require local dispute resolution, as foreign dispute resolution is also recognized under Pakistan laws and therefore would be in accordance with the law in force in Pakistan. Therefore, the specific terms of the particular PPP agreement should be referred to.

KPK PPP Act

Section 39 of the KPK PPP Act provides that the PPP agreement shall be governed by the laws of Pakistan and such laws as are applicable in the Province of Khyber Pakhtunkhwa, unless otherwise provided in the PPP agreement. Therefore, foreign governing law may be chosen to govern a particular PPP agreement, subject to mutual agreement.

What dispute resolution mechanisms are available for PPP agreements?

The method of dispute resolution should be consistent with the laws of Pakistan. The resolution of disputes is subject to the respective PPP statute and the PPP agreement between the procuring authority and the private party. Internal referral procedures are encouraged with the parties aiming to reach amicable settlements. Local and international arbitration are available options for resolving disputes under the Federal PPP Act, the Punjab PPP Act, and the KPK PPP Act, provided that international arbitration is not inconsistent with the laws of Pakistan. It is not clear whether international arbitration is an available option under section 27(2) of the Sindh PPP Act and reference should be made to the terms of the particular PPP agreement. The Punjab PPP Act, the Sindh PPP Act, and the KPK PPP Act provide for arbitration as the dispute resolution mechanism. The Federal PPP Act does not explicitly provide for arbitration as the required dispute resolution mechanism. However, section 13(2)(d) of the Federal PPP Act read with the Rule 49(2) of the Public Procurement Rules, 2004 suggests that arbitration is required; reference should be made to the terms of the particular PPP agreement.

Has the country signed New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?

Yes, Pakistan became a signatory to the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York Convention) on 30 December 1958. The New York Convention was first implemented vide the Recognition and Enforcement (Arbitration Agreements and Foreign Arbitral Awards) Ordinance, 2005 which was subsequently re-promulgated from time to time (Foreign Arbitration Ordinances), before it was enacted as the Recognition and Enforcement (Arbitration Agreements and Foreign Arbitral Awards) Act, 2011 on 19 July 2011 (Foreign Arbitration Act); the Foreign Arbitration Ordinances promulgated from time to time and the Foreign Arbitration Act are substantially

identical. In terms of Article V of the New York Convention, a foreign arbitral award will not be enforced where recognition and enforcement of the same would be contrary to the public policy of Pakistan. The term "public policy" is not defined in the Foreign Arbitration Act and/or judicial pronouncements in relation to the enforcement of foreign arbitral awards. Hence, the meaning ascribed to the phrase "public policy" in section 23 of the Contract Act, 1872 has been interpreted by the courts⁴¹ in this context.

The international arbitration framework alternative dispute resolution centers have recently been established in Pakistan. Judicial processes should not be initiated by the relevant parties to the dispute unless all other remedies in the PPP agreement have been exhausted.

6.1.1.11 Lender's Security Rights

	2016	2017
Does the law specifically enable lenders the following rights?		
Security over the project assets	✓	✓
Security over the land on which they are built (land use right)	✓	✓
Security over the shares of a PPP project company	✓	✓
Can there be a direct agreement between the government and lenders?	✓	✓
Do lenders get priority in the case of insolvency?	✓	✓
Can lenders be given step-in rights?	✓	✓

In securing loans for projects, the laws of Pakistan allow project companies to procure loans from both local and foreign banks and financial institutions. The primary legislations dealing with investment matters are the Investment Policy,⁴² the Reforms Act,⁴³ the Foreign Exchange Regulation Act, 1947,⁴⁴ the Foreign Exchange Manual,⁴⁵ and various notifications and circulars issued by the SBP from time to time pertaining to foreign exchange.

⁴¹ In *Kolaparti Venkatereddi versus Kolaparti Peda Venkatachalam* (AIR 1964 Andhra Pradesh 465), it was observed that the term "public policy" does not have any definition, since it is a variable quantity that varies with the habits, capacities, and opportunities of the public. Public policy is equivalent to the "policy of the law" in letter and spirit. The Supreme Court of Pakistan in *Ghulam Ali versus Ghulam Sarwar Naqvi* (PLD 1970 SC 1) has further expounded the parameters of "public policy" by holding that, in the Pakistani Constitutional setup with the Objectives Resolution being its part, new principles of public policy with Islamic ethos/spirit would have to be defined and applied. Foreign arbitral awards may be unenforceable on, among other things, the following public policy grounds: (i) where the award is against the Objectives Resolution; and/or (ii) where enforcement would be against national interest, for instance, where the court comes to a conclusion that the enforcement of the award would be detrimental to internal or external security of the country or the award tends to jeopardize the economic interests of the country.

⁴² Government of Pakistan. 2013. *Investment Policy*. <http://boi.gov.pk/UploadedDocs/Downloads/InvestmentGuide.pdf>.

⁴³ Government of Pakistan. 1992. *Protection of Economic Reform Act*. <http://boi.gov.pk/UploadedDocs/Downloads/InvestmentGuide.pdf>.

⁴⁴ Foreign Exchange Regulation Act, 1947. Act No. VII. <http://www.sbp.org.pk/about/ordinance/ordinance-.pdf>.

⁴⁵ Foreign Exchange Manual - 2018. http://www.sbp.org.pk/fe_manual/.

Section 13(1)(b) of the Foreign Exchange Regulation Act prohibits transfer of any security,⁴⁶ or creation or transfer of any interest in a security to or in favor of a nonresident, except with the general or special permission of the SBP. General permissions are those that are already contained in the Foreign Exchange Manual. Where the Foreign Exchange Manual does not provide general permission, special permission has to be sought of the SBP.

Security over the Project Assets

In Pakistan, security may be created over the company's project assets through hypothecation in favor of lenders. The project company may also enter into a Letter of Lien and Set-Off which usually applies to the project accounts of the company.

Security over the Land on Which They are Built (Land use Right)

Security over the company's immovable assets (land) is generally created in the form of an equitable mortgage by deposit of land title deeds to avoid levying of a significant amount of duty. The security instrument is a Memorandum of Deposit of Title Deeds, which confirms the creation of the security.

Security over the Shares of a PPP Project Company

A pledge on the shares of the project company may be created in favor of lenders through physical transfer of possession of the original share certificates (usually accompanied with blank transfer deeds). The company and lenders enter into a share pledge agreement to confirm the creation of the security. In case of foreign financing, the pledge is not enforceable until consent is procured from the SBP.

After the introduction of the Companies Act, the pledge on shares has become registrable. Enforcement of share pledge should be considered in the context of the type of company (i.e., public unlisted or private) since the rights in relation to each vary.

Can there be a direct agreement between the government and lenders?

Generally, direct agreements are acceptable forms of security. They are often included in project finance transactions executed in Pakistan and also apply to PPP projects.

Do lenders get priority in case of insolvency?

Lenders do get priority in case of insolvency to the extent of the registration of their charges against the borrower's assets. Such charge registration is perfected through filing of a Form 10, following which the Securities and Exchange Commission of Pakistan issues a charge certificate acknowledging the security perfection. Therefore, if the lenders have perfected a first ranking charge, they will get priority in case of insolvency.

⁴⁶ The term "Security" is defined in Section 2(k) of the Foreign Exchange Regulation Act as follows:

"(k) "Security" means shares, stocks, bonds, debentures, debenture stock and Government securities, as defined in Securities Act, 1920, deposit receipts in respect of deposit of securities, and units or subunits of unit trusts, but does not include bills of exchange or promissory notes other than Government promissory notes;"

However, before such priority can be exercised by the lenders, in case of insolvency, any outstanding amounts to the government in the form of taxes, utility bills, or land dues are deducted first.

Can lenders be given step-in rights?

Step-in rights are given to lenders through the direct agreements. This is a well-established practice. Under the standard concession agreements for the power sector, the counterparty is restricted from terminating such concession agreements without first giving a copy of any notice required to be given to the project company to the lenders. The lenders are entitled to cure or procure the cure of any defaults of the project company within the cure period allowed. Lenders are also allowed to assume operations of the facilities and granted extended cure periods to remedy the project company's defaults.

6.1.1.12 Termination and Compensation

	2016	2017
Does the law specifically enable compensation payment to the private partner in case of early termination due to:		
Public sector default or termination for reasons of public interest	✓	✓
Private sector default	✓	✓
Force majeure	✓	✓
Does the law enable the concept of economic/financial equilibrium?	✓	✓
Does the law enable compensation payment to the private partner due to:		
Material adverse government action	no data	no data
Force majeure	✓	✓
Change in law	✓	✓

Does the law specifically enable compensation payment to the private partner in case of early termination due to:

Public Sector Default or Termination for Reasons of Public Interest

The law is not restrictive on the provision of compensation payments to the private partner in case of early termination, and such compensation payments are covered as a contractual matter under projects. Under the standard power concession agreements, the occurrence of an event of default on the part of the public partner, unless caused in whole or material part

by a breach of the project company under the respective agreements, and unless such events occur as a result of a force majeure event, enables compensation payments to be paid to the private partner.

Private Sector Default

In the case of an early termination due to the project company's default, compensation payments are made to the extent contractually decided.

Force Majeure

The law does not restrict payment of compensation due to termination on the occurrence of force majeure events. The concept is most prevalent under the power sector, but even in other sectors, compensation payments are allowed in the event of termination due to the occurrence of force majeure events to safeguard the private partner against political change/disruptions, against changes in law, and against other external events beyond the control of either party. In either scenario, depending on the contractual arrangement between parties, the public partner often makes compensation payments on termination for such events.

Does the law enable the concept of economic/financial equilibrium?

As per section 31 (2) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (NEPRA Act), the law requires the National Electric Power Regulatory Authority (NEPRA) to issue a tariff determination keeping in view "the protection of consumers against monopolistic and oligopolistic prices," "economic efficiency in the electric power industry," and "elimination of exploitation and minimization of economic distortions."

Pursuant to section 31 (3) of the NEPRA Act, the law also subjects NEPRA to the such guidelines, namely: "tariffs should allow licensees the recovery of any and all cost prudently incurred to meet the demonstrated needs of their customers," "tariff should allow licensees a rate of return which promotes continued reasonable investment."⁴⁷

Does the law enable compensation payment to the private partner due to force majeure or change in law?

The law specifically does not restrict payment of compensation to the private partner due to a force majeure event or a change in law, these are subjects that are covered under the contractual arrangements between the private and the public partners. However, to safeguard the interests of the investors, the public partner covers the risk of force majeure events and changes in law. Such contractual provisions are most prominent under the power sector but, at present, are also prevalent in other sectors.

⁴⁷ The upcoming amendments to the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, promulgate the concept of economic equilibrium whereby the interest of both the consumers and the investors are being protected and brought to an equilibrium.

6.1.1.13 Government Support

	2016	2017
Is project development fund available?	✓	✓
Land acquisition support from the government:		
Resettlement and/or compensation cost to residents at the project site	Mixed data ^a	Mixed data
Imposed limits on timeframe to complete land acquisition (day)	✗	✗ ^b
Is there dedicated agency to streamline land acquisition?	no data	no data
Exemption from/reduction of land use fees	✗	✗
Viability gap fund (VGF)		
Limits to VGF as a percentage of projects capital cost	Mixed data	Mixed data
Government guarantees:		
Currency inconvertibility and transfer risk	no data	no data
Foreign exchange risk	no data	no data
War and civil disturbance risk	✓	✓
Breach of contract risk	✓	✓
Regulatory risk	✓	✓
Expropriation risk	✓	✓
Government payment obligation guarantee	✓	✓
Credit guarantees	no data	no data
Minimum demand/revenue guarantee	✓	✓
Availability-/performance-based payment contracts	✓	✓
Tax subsidies	no data	no data

Notes:

^a Land acquisition support from the government in the form of resettlement and/or compensation cost to residents at the project site is available under provincial Public Private Partnership arrangements, please refer to section 15(1) of the Sindh Public Private Partnership Act, 2010 and section 19 (2) of the Punjab Public Private Partnership Act, 2014.

^b There are no imposed time limits to complete land acquisition under the relevant federal and provincial legislature; however, it should be noted that the PPP contracts/arrangements entered into between the private party and government will impose a time limit by which the government agency must complete land acquisition.

Those indicators (shown in yellow in the table above) reflect the fact that while the PPP policy for the Punjab province provides that a government guarantee for a PPP project may cover the mentioned risks, this arrangement is not clear for the other provinces within Pakistan.

Details of available government support for PPP projects in the Pakistan are provided in Table 6.2.

Table 6.2: Details of Available Government Support for PPP Projects in Pakistan

Government Support Type	Comments
Public Private Partnership Authority Fund	The Public Private Partnership Authority was set up as an independent body by the federal government with various roles relating to the development of the PPP regulatory environment in Pakistan. Some of the key functions of the authority are to monitor the implementation of PPP agreements, approve PPP agreements for procuring authorities, approve feasibility studies and bid documents and proposals for projects, review and strengthen the institutional and regulatory framework for the effective implementation of PPPs of the federal government, and approving policies for contracting agencies. The Public Private Partnership Authority Fund will be vested in the Public Private Partnership Authority in order to assist with the functions of the authority, which includes the effective development of the institutional capacity of the PPP framework in Pakistan.
Land acquisition and resettlement	Support for land acquisition and resettlement cost could be provided by the implementing agency/local government unit on a case-by-case basis. Such support would include provision of utility connections for power, gas, and water at project site; clearance of right-of-way or acquisition of land necessary for the project; and, rehabilitation and resettlement necessitated because of the execution of the project.
VGF	Government can provide VGF for projects that are deemed economically feasible but not financially feasible. Relevant projects may be eligible for a grant, subsidy, or a different form of financial support from the VGF. The government will provide VGF for PPP projects that are economically and socially justified but fall short of financial viability. This would be an explicit subsidy that is performance-driven (based on private party achieving measurable outputs) and, if possible, targeted toward socioeconomically disadvantaged users or groups of users.
Government guarantees	Government guarantees may be provided in different forms, covering contingent liabilities in particular government contracting agencies obligations under PPP contracts. Government guarantees for other risks such as demand risk, and default by a government agency on payments due under a PPP agreement shall be assessed and determined on a case-by-case basis.
Availability-/ performance-based payment contracts	Availability- and performance-based payment schemes are allowed under different contractual arrangements.

PPP = public-private partnership, VGF = viability gap fund.

Sources: National Assembly Secretariat, Government of Pakistan. 2017. Public Private Partnership Authority Act No. VIII of 2017. Islamabad; Public Private Partnership Cell, Planning and Development Department, Government of the Punjab. Policy for PPPs in Infrastructure. Punjab.

PPP projects that received government support	1990– 2016	1990– 2017	In 2017
Viability gap fund	28	28	-
Government guarantees	2	2	-
Availability-/performance-based payment basis	2	2	-

6.1.1.14 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Power purchase agreement	✓	✓
Capacity take-or-pay contract	✓	✓
Fuel supply agreement	✓	✓
Transmission and use of system agreement	✗	✗
Performance-based operation and maintenance contract	✓	✓
Engineering procurement and construction contract	✓	✓

Implementation/Concession Agreement

The implementation agreement is the agreement signed between the federal government and project company under which the federal government provides certain undertakings to the project (with respect to, for example, support to obtain consents and permits, taxation and import control undertakings, and undertakings with respect to foreign exchange and the availability of funds in Pakistan). The federal government also provides protection to sponsors and lenders in case of termination of the project agreements under specific circumstances.

A sovereign guarantee is issued pursuant to the implementation agreement where the federal government guarantees the payment obligations of the power purchaser and the federal government.

Energy/Power Purchase Agreement

The energy purchase agreement (EPA) or the power purchase agreement (PPA) is the agreement signed between the power purchaser and the project company under which the power purchaser undertakes to purchase the output from the project company and then sell the output on the market. The EPA/PPA sets out the terms and conditions on which the power purchaser purchases the output and/or capacity (as the case may be) from the project company. For the bankability of the project, the project company determines that enough revenue will be generated from the project to service debt and make a profit to be distributed as

dividends. The revenue generated from the EPA/PPA is used to pay for, among other things, the operating expenses, debt servicing, and procuring fuel (in case of nonrenewable projects).

The EPA/PPA further provides protection to investors and lenders against specific political risks, against changes in the tax and duty regime, and, with suitable indexation of tariff components, it covers the risk of losses caused due to exchange rate variations and inflation. Such protection, however, should be based on applicable tariffs.

Capacity Take-Or-Pay Contract

The capacity take-or-pay contracts require the power purchaser to make payments to the project company for making the output available, regardless of whether the output is off-taken or not. These contracts apply to nonrenewable projects. For renewable projects, the offtake requires to purchase all output of companies.

Fuel Supply Agreements

The fuel supply agreement is the agreement signed between the project company and the fuel supplier for the sale and purchase of fuel that is necessary to operate the project. The fuel supply agreement sets out the terms and conditions of the sale and purchase of fuel. The fuel supply agreement is usually back-to-back with the PPA as the dispatch instructions therein are required for fuel ordering under the fuel supply agreement. Performance obligations of the fuel supplier are no longer guaranteed by the federal government.

Performance-Based Operation and Maintenance Contract

After completion of the construction of the works, a project company usually requires experts to operate and maintain the project during the concession period. An operation and maintenance contract therefore involves managing the operations of the project, providing maintenance of the complex, running it as per the requirements of the system operator, and on the dispatch instructions of the power purchaser. Where the project does not operate on the thresholds required by the power purchaser, the power purchaser, in some instances, has the ability to withhold payments or collect damages.

Engineering Procurement and Construction Contract

Even though the standard documentation for engineering procurement and construction (EPC) contracts are not International Federation of Consulting Engineers (FIDIC) based, guidance is still derived from the FIDIC formats. Once financing has been arranged for the project by the project company, lenders usually require an EPC contract in place to commence construction works soon after the financial close of the project. The project company enters into an EPC contract with a construction contractor who undertakes to engineer, design, and construct the project within certain timelines for the project to be functional by the time the power purchaser/federal government requires it to be functional. The project company requires the construction contract to provide warranties of the equipment installed, procure the necessary licenses and approvals for commissioning of the complex, complete the construction on time, and ensure functionality and performance of the completed works.

6.1.2 Institutional Capacity for Implementation

6.1.2.1 Institutional Setup

	2016	2017
Is there a specialized government agency (or agencies) established for PPP purposes (e.g., PPP unit)?	✓	✓
What role does this PPP unit have?		
Guidance to and coordination between other government agencies	✓	✓
Supporting (e.g., PPP project preparation, appointment of advisers, running project development fund)	✓	✓
Appraisal of PPP project feasibility studies	✓	✓
Approval of PPP projects	✓	✓
Procurement	×	×
Managing, monitoring, and enforcing ongoing PPP contracts	✓	✓

Prior to the passing of the PPP Authority Act in 2017, the Infrastructure Project Development Facility (IPDF) was the federal body with the role of developing and supporting the regulatory framework for PPPs in Pakistan. This role has recently been given to the PPP Authority after the passing of the PPP Authority Act in 2017. However, the PPP Authority was not fully operational and did not have the human and financial resources to undertake its mandate at the beginning of 2018.

The PPP units under the provincial jurisdictions in Sindh and Punjab were set up as specialized units for the above PPP purposes on a provincial level. PPP project procurement is not the responsibility of the PPP Authority, or the PPP Unit for the Province of Sindh, or the PPP Cell for the Province of Punjab. The procuring authority is the responsibility of line ministries, contracting authorities, and other provincial or federal bodies.⁴⁸ PPP-promoting institutions in Pakistan are listed in Table 6.3.

Table 6.3: PPP-Promoting Institutions in Pakistan

Institution	Role in Promoting PPP
Public Private Partnership Authority	<ul style="list-style-type: none"> Overall policy-making body for all PPP-related matters. It is responsible for setting the strategic direction of the PPP program and creating an enabling policy and institutional environment for PPPs; Ensure that all PPP projects are consistent with national and sector strategies;

continued on next page

⁴⁸ Government of Pakistan. 2010. Pakistan Policy on Public Private Partnerships. Islamabad.

Table 6.3 continued

Institution	Role in Promoting PPP
	<ul style="list-style-type: none"> • Ensure that projects deliver value for money by conducting an analysis to evaluate projects; • Make assessment of fiscal risks; • Advise and facilitate the implementing government authority/ agency to identify, develop, structure, and procure projects; • Standardize the contractual provisions and develop sector-specific provisions of the model PPP agreements; • Develop annuity, user-based, and hybrid financial models for the projects; • Ensure that project agreements are consistent with the provisions of the Federal Public Private Partnership Act; • Interact, collaborate, and liaise with international agencies; • Play the role of gatekeeper at all stages of project cycle such as planning, tendering, bidding, and contract; and • Prescribe a limit on the size of PPP projects that an implementing authority may undertake.
PPP Unit for Khyber Pakhtunkhwa, PPP Unit for Sindh, and Punjab PPP Cell	<p>The respective units have been set up in three provinces in Pakistan to facilitate and support the development of PPPs through relevant procuring authorities in their respective provinces. These PPP units, among other things</p> <ul style="list-style-type: none"> • provide technical, financial, and legal expertise to any PPP-procuring authority in the provinces; • provide capacity building to, and advise contracting authorities or other parties involved in the planning, coordinating, undertaking, or monitoring of projects under the PPP Act; • assist contracting authorities, where necessary, to design, identify, select, prioritize, appraise, evaluate, and negotiate infrastructure and development projects; • review and assess requests for government support in relation to a project and advise the relevant procuring authority on the support that should be accorded in relation to a project; • facilitate the preparation of a project by a government agency; • act as a PPP catalyst, and policy and project adviser in the respective provinces; • develop operating guidelines, procedures, and model documents for projects; • provide support and advice to any government agency regarding PPP projects throughout the PPP process; • assist the respective provincial PPP committee to evaluate and prioritize project proposals submitted by the government agencies; and • prepare and regularly update a pipeline of projects in consultation with the government agencies and make updated lists of PPP projects.

continued on next page

Table 6.3 continued

Institution	Role in Promoting PPP
Other supporting provincial bodies	<p>A general outline of the bodies that may or may not exist in the individual provinces which have developed PPP frameworks in Pakistan include</p> <ul style="list-style-type: none"> • Risk Management Unit – Established in provincial finance departments to review requests for government support and to ensure fiscal capacity for support; • Implementing agency/contracting authority/government agency – department, attached department, body corporate, autonomous body of the government, local government, or any organization or corporation owned or controlled by the government. It is with this body that the private party enters into a PPP agreement; • PPP Nodes – The administrative head of each agency which seeks to implement a project on a PPP basis, should form a PPP Node to <ul style="list-style-type: none"> – Identify suitable PPP projects and prioritize these within their sector or geographical area of responsibility; – Supervise the preparation of feasibility studies, and if their outcome is positive, submit proposals to the relevant PPP Policy Board; – Conduct a competitive tendering process consisting of prequalification and bidding to select the private sector partners; – Carry out bid evaluation and submit recommendations on contract award to the board; – Negotiate and sign the PPP agreement; and – Monitor and evaluate implementation and operation of the project.

PPP = public–private partnership.

Sources: Public Private Partnership Cell, Planning and Development Department, Government of the Punjab. Policy for PPPs in Infrastructure. Punjab; Government of Sindh, Finance Department. 2012. Policy for Public–Private Partnerships. Sindh; National Assembly Secretariat, Government of Pakistan. 2017. Public Private Partnership Authority Act No VIII of 2017. Islamabad.

6.1.2.2 Project Planning

	2016	2017
Is there a PPP project pipeline developed and available?	✓	✓
Is preliminary selection of PPP projects consistent with public investment prioritization?	✓	✓
Is there screening/identification methodology to identify a list of potential PPP projects from public investment priority projects?	✓	✓

PPP units in Punjab, Sindh, and Khyber Pakhtunkhwa provinces manage and update PPP project pipeline, and updated PPP project pipelines for Punjab and Sindh are available online.⁴⁹ Similarly, the IPDF had a pipeline of PPP projects listed.⁵⁰

The Planning Commission reviews and approves the Public Sector Development Program. The Planning Commission screens and proposes potential PPP projects from the program. This is in consultation and coordination with the PPP Authority, and the line ministries and other contracting authorities. The contracting authorities have various responsibilities in relation to the planning, development, procurement, implementation, execution, and monitoring of PPP projects. Contracting authorities coordinate identification and screening of projects with the respective PPP units to determine whether that project would be suitable for development as a PPP within the respective jurisdiction.⁵¹

6.1.2.3 Project Preparation

	2016	2017
Number of project appraisal stages	3	3
What feasibility analyses are required for the project to be approved as a PPP?		
Technical feasibility	✓	✓
Financial feasibility	✓	✓
Legal feasibility	✓	✓
Environmental and social sustainability	✓	✓
Value for money assessment	✓	✓
Fiscal affordability assessment	✓	✓
PPP structuring and risk allocation	✓	✓
Initial market testing	✓	✓
Number of approvals to be obtained by public sector to get final go-ahead to commence PPP project procurement	1/2	1/2
Is the approval from the Ministry of Finance or equivalent required before commencement of procurement?	✓	✓
Is it a normal practice to appoint independent, international, and qualified advisers to assist the government with project preparation?	✓	✓

⁴⁹ PPP Unit Sindh. http://www.pppunitsindh.gov.pk/projects_dpa.php (accessed 22/02/2018); PPP Cell Punjab. http://www.ppp.punjab.gov.pk/pipeline_projects.

⁵⁰ IPDF. <http://www.ipdf.gov.pk/index.php?cmd=projB>.

⁵¹ Government of Pakistan. 2010. Pakistan Policy on Public Private Partnerships. Islamabad.

PPPs in Pakistan typically go through three primary appraisal stages: financial assessment, value assessment, and economic assessment.⁵² The Pakistan Policy on Public Private Partnerships provided initial clarity on the required feasibility analysis for the development of PPPs in Pakistan.

The IPDF developed a Project Preparation/Feasibility Guideline for PPP projects. This was aimed at providing PPP implementing authorities with the methodology required to

- screen projects as being suitable for development as PPPs,
- carry out a preliminary feasibility,
- conduct a risk appraisal methodology, and
- carry out the necessary due diligence processes.

In terms of approvals, the PPP Authority acts as gatekeeper during all stages of a project cycle. During the planning, tendering, bidding, and contract stages, the approval of the PPP Authority is required. A project will need an approval from the Ministry of Finance whenever public financial obligations are involved.

6.1.2.4 Risk Allocation

	2016	2017
Preferred risk allocation matrix as reference	no data	no data

The Pakistan PPP Policy mentions the development of Risk Management Guidelines; however, there is no evidence of a preferred risk allocation matrix.

6.1.2.5 Procurement

	2016	2017
Is competitive bidding the only method for PPP partner selection?		
In case of competitive tender:		
Prequalification required?	✓	✓
Minimum time allowed to submit prequalification/expressions of interest (day)	15	15
Minimum time allowed to submit a bid:		
Domestic bidding (day)	no data	no data

⁵² Infrastructure Project Development Facility. 2007. Project Preparation/Feasibility Guidelines for PPP Projects. Islamabad.

	2016	2017
International bidding (day)	no data	no data
Is negotiation available?	✗	✗
Is there a process allowing unsuccessful bidders to challenge the award/make a complaint?	✓	✓
If yes, maximum time allowed to submit a complaint starting from announcement of a preferred bidder	n/a	n/a
Maximum time limit from bid closing date until selection of a preferred bidder	no data	no data
Maximum time limit from selection of a preferred bidder until signing the contract	no data	no data
Transparency. Which of the following is published?		
Procurement notice	✓	✓
Q&A during bid clarification stage	no data	no data
Evaluation results to bidders	no data	no data
Award notice	✓	✓
Contract	✗	✗
Confidentiality	✓	✓

The Pakistan policy on PPPs provides that, in some cases, unsolicited bids may require competitive bidding, while it may also be the case that unsolicited bids are directly negotiated. The PPP Authority Act describes that, in some cases authorized by the federal government, the procuring authority may negotiate the procurement of the PPP with the private party.

The yellow tabs in the indicator refer to projects in which the federal government has equity or ownership in the company. These have been sourced from the public procurement rules set out by the Public Procurement Regulatory Authority (PPRA) in the procurement code. This provides a framework of procurement of goods and/or services for procurement made by a public authority. This code is only applicable for PPP projects in which the federal government has equity and ownership in the project company, in which case the procurement code's contents that apply are the Public Procurement Regulatory Authority Ordinance, 2002; the Public Procurement Rules, 2004; the Public Procurement Regulations, 2008; the Public Procurement Regulations, 2009; the Procurement of Consultancy Services Regulations, 2010; the Public Procurement Regulations, 2011; and the PPRA Instructions.

The Pakistan PPP Policy, PPP Authority Act, Provincial (Punjab/Sindh) Procurement Regulatory Authority Act and Rules control the PPP procurement functions in the provincial governments of Sindh and Punjab. Federal legislation is not fully aligned with the PPP procurement processes throughout the provinces of Pakistan. The federal PPRA Rules do not provide any framework for PPP procurements in Pakistan. There is a need to align procurement laws and procedures at

the federal and provincial levels to enable greater private sector participation and competition, and to create an aligned environment for PPPs across provincial boundaries.⁵³

The features of the project life cycle, including the steps of the procurement process, are presented in Table 6.4.

Table 6.4: PPP Procurement Process in Pakistan

Theme	Description
Responsible agency	Line ministries, federal bodies, and provincial and local authorities, as well as state-owned enterprises, are the contracting parties on behalf of the federal government with private parties. They will therefore be responsible, mainly or in conjunction with other bodies, for the identification, selection, sponsorship, preparation, tendering, and monitoring of PPP projects in their sectors. The line ministries that want to promote PPPs will prepare Model Concession Agreements for that particular sector. Strong support for the line ministries is available from institutions such as the Public Private Partnership Authority, the Ministry of Finance, and the Planning Commission.
Project inception	<ul style="list-style-type: none"> • a decision is made to explore the PPP for the development of a project; • Potential PPP projects are identified from master plan or through preliminary needs analysis; • The project is screened using multiple criteria; • A decision is made on the option to pursue the project; • The project is registered with the PPP Cell/Unit; • The technical and financial proposals are evaluated.
Project preparation	<ul style="list-style-type: none"> • feasibility studies are carried out and a review is conducted on their conclusions and recommendations; • A decision is made on whether to proceed with the project any further; or to reject or send back for reconsideration the project proposal.
Transaction execution	<ul style="list-style-type: none"> • an information memorandum is prepared for project marketing; • Market sounding of potential investors and lenders is conducted; • Project structure and tender documents are finalized; • Private partners for PPP projects are selected through transparent and competitive tendering, using a two-stage process of prequalification and bidding; • A request for prequalification applications is issued: a notice is published inviting private companies and consortia of such companies to submit prequalification applications. Based on appropriate predefined criteria such as legal requirements, technical capability, financial capability; • Prequalification applications are evaluated to determine which among the companies and consortia meet these criteria; • After prospective private partners have been prequalified, an invitation will be issued for these private parties to submit bids; • A pre-bid conference will be conducted to clarify the terms and conditions of the draft PPP agreement;

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⁵³ PPRA. 2013–2016. Draft National Procurement Strategy. Islamabad. <http://www.ppra.org.pk/doc/draftnps.pdf>.

Table 6.4 continued

Theme	Description
	<ul style="list-style-type: none"> Received bids are evaluated: bid evaluation will be carried out in two phases. First, the technical, operational, environmental, and commercial soundness of the bids received will be assessed through the requirements, criteria, and minimum standards specified in the tender documents, and noncompliant bids will be rejected. The responsive bids will be evaluated in the second phase from the financial viewpoint. The evaluation will be based on a parameter specified in the tender documents, which is also dependent on the type of the PPP project; Depending on the number of bids received, the procuring authority may need to restructure the project and re-bid if too few bids are received. Alternatively, if the required number of private bidders submit bids, a recommendation is made on the contract award to the approving authority; The awarding authority will decide on whether to approve or send back for reconsideration the contract award recommendation; Subject to the approval of the approving PPP authority, the preferred bidder is chosen; Results of the bidding process are announced and a notice of award is issued to the selected private partner; Negotiations are conducted with the preferred bidder—these negotiations focus on terms and conditions not directly specified in the tender documentation; The PPP agreement is signed; Conditions precedent to financial closure are fulfilled; the private partner will endeavor to achieve financial close within the predetermined period specified in the tender documentation. The period to achieve financial close from signing of the PPP agreement should not be more than 12 months.
Construction, operation, and transfer	<ul style="list-style-type: none"> Project implementation is monitored to ensure conformity with plans and specifications; Project operation is monitored and evaluated to ensure conformity with performance standards and tariffs; Financial performance of the project is monitored and evaluated; Arrangements are made for the project transfer to the government at the end of the term of the PPP agreement.

PPP = public-private partnership.

Sources: Government of Pakistan. 2010. Pakistan Policy on Public Private Partnerships. Islamabad; Public Private Partnership Cell, Planning and Development Department, Government of the Punjab. Project Inception Guidelines. Punjab; Public Private Partnership Cell, Planning and Development Department, Government of the Punjab. Policy for PPPs in Infrastructure. Punjab.

6.1.3 PPP Market Maturity

	1990–2016	1990–2017	In 2017
PPP projects that reached financial close	83	89	6
PPP projects currently in preparation	n/a	n/a	5
PPP projects currently in procurement	n/a	n/a	47

6.1.4 Financial Facilities

	1990– 2016	1990– 2017	In 2017
Cumulative PPP projects with foreign lending participation	34	40	6
Cumulative PPP projects that received export credit agency/ international financing institution financing	38	42	4

	2016 ^a	2017 ^b
Availability of nonrecourse/limited recourse hard currency loan	✓	✓
Maximum tenor (year)	5–7 years	5–7 years
Up-front arrangement fee	100–150 bps	100–150 bps
Floor rate (reference rate)	LIBOR	LIBOR
Margin rate	45–50 bps	45–50 bps
Political risk cover premium	150–400 bps	150–400 bps
Availability of nonrecourse/limited recourse local currency loan	✓	✓
Maximum tenor (year)	10–14 years	10–14 years
Up-front arrangement fee	100–150 bps	100–150 bps
Floor rate (reference rate)	KIBOR	KIBOR
Margin rate	100–350 bps	100–350 bps
Availability of interest rate swaps	✓	✓
Forward duration of interest rate swap (year)	2–5 years	2–5 years
Availability of currency swaps	✓	✓
Forward duration of currency rate swap (year)	1–5 years	1–5 years
Project financing through project bond issuance	✗	✗
Percentage of project bonds out of total debt for project financing	n/a	n/a
Availability of project financing from local public sector banks	✓	✓

	2016 ^a	2017 ^b
Max tenor for loan from local public sector banks (year)	5–15 years	5–15 years
Percentage of foreign debt out of total debt for project financing	30–50%	30–50%
Typical D:E ratio	75:25	80:20
Timeline to financial close	>12 months	>12 months
Minimum DSCR covenant levels	1.3x–1.6x	1.3x–1.6x

bps = basis points, D = debt, DSCR = debt-service coverage ratio, E = equity, KIBOR = Karachi Interbank Offered Rate published by the State Bank of Pakistan, LIBOR = London interbank offered rate.

^a Sample size = 3 PPP projects

^b Sample size = 3 PPP projects

Historically, infrastructure projects in Pakistan have been financed through a mixture of both public and private investment.

Table 6.5 shows the most active banks (in the past 24 months) for project finance in Pakistan.

Table 6.5: Active Banks for Project Finance in Pakistan

Name of Bank	Total Project Financing (\$ million)	Transactions
Export-Import Bank of China	990	2
Industrial and Commercial Bank of China	675	1
Habib Bank	315	1
Silk Road Fund	315	1
China Development Bank	315	1

Source: Inframation Deals (information extracted as at 8 March 2018).

The Ministry of Finance had established the Infrastructure Project Development Facility (IPDF) to facilitate the origination, preparation, and closure of PPP projects, and to determine and meet the funding gap necessary for making PPP transactions commercially viable. The Infrastructure Project Finance Facility (IPFF) was then established to complement the IPDF and cover the financial aspect of PPP development. The IPFF will develop essential links with commercial and financial institutions, multilateral banks, and the wider investment community. The IPFF will independently evaluate PPP projects and provide the required financial support (either in the form of loans or grants) for the project to be commercially acceptable.

The government will provide endowments for the initial years of the IPFF to allow a smooth transition into a regulated body that has commercial viability and the ability to function independently as a viable source of PPP financing. The IPFF will also promote awareness of PPP potentials and encourage wider participation from the private financial institutions.

The market demand for both loans and debt capital market products in Pakistan is generally restricted to low tenors, and investors are highly reluctant to lend money for longer periods. As the country's debt and capital markets are not developed, the issuer or borrower will need to provide highly attractive returns to successfully solicit private investment for longer tenors.

Another problem in Pakistan is the market's inability to provide infrastructure projects with fixed lending rate. Under an uncertain interest rate environment, lenders are hesitant to lend at a fixed rate over a long period of time, especially given the limited appetite in the interest rate swaps market. The problem is further complicated by the short-term nature of deposits held by banks, which act as an impediment to lending the long tenors required in infrastructure financing.

Guarantees given by municipalities and public sector enterprises while soliciting investment from the private sector have precedence of not being fully adhered. This has led to a reluctance in lending to these institutions, especially given the limited recourse the investors have on these institutions under the current legal and political framework.⁵⁴

6.2 Roads

6.2.1 Regulatory Framework

6.2.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

6.2.1.2 Government Contracting Agency

The National Highway Authority (NHA) is responsible for managing the design, development, and operation of a 12,000-kilometer network of national highways and motorways. The NHA is empowered, under NHA Act, to initiate, operate, and award projects through private sector financing. According to their strategy, PPP is becoming an essential component of the NHA's development strategy.⁵⁵

⁵⁴ State Bank of Pakistan Infrastructure Task Force. *The Pakistan Infrastructure Report*. <http://www.sbp.org.pk/departments/ihfd/InfrastructureTaskForceReport.pdf>.

⁵⁵ National Highway Authority. http://downloads.nha.gov.pk/index.php?option=com_content&view=article&id=406:about-ppp&catid=69:public-private-partnership&Itemid=99.

The NHA publishes the list of projects under tender on its website (see Table 6.6).

Depending on the nature of the project, the NHA could be assisted by the central PPP Unit of Pakistan, or the local PPP cells. Even though these entities would not be the contracting entity, they would play a role in the procurement process.

For example, the Punjab PPP cell defines its functions as follows:⁵⁶

- provide technical support to the committee and act as its secretariat;
- develop operating guidelines, procedures, and model documents for projects for approval by the committee;
- provide support and advice to a government agency throughout the PPP process;
- evaluate and prioritize project proposals submitted by the government agencies;
- evaluate, in close cooperation with the Risk Management Unit, the type and amount of government support sought for a project;
- review bid evaluation report submitted by a government agency;
- prepare and regularly update a pipeline of the projects; and
- perform any other functions as may be assigned to it by the committee.

6.2.1.3 Sector-Specific Regulations

	2016	2017
Does the private partner have a legal right to charge users?	✓	✓

According to the Private Participation in National Highways Policy,⁵⁷ concessionaires will be given the right to collect tolls at locations they consider appropriate and are approved by the NHA, within their specified concession area.

The policy reports that:

- The tolls charged for use of the national highway or bridge will be one of the key evaluation factors used to decide which bidder is awarded the concession.
- The PPP Cell will monitor the concessionaires' implementation of the contracted toll structure contained in the Concession Agreement and will exercise its powers to penalize or take necessary action against default under the provisions of the Concession Agreement.
- Escalation of toll rates and toll charges will be permitted, using the formula contained in the Concession Agreement.

⁵⁶ Punjab PPP. Functions. <http://www.ppp.punjab.gov.pk/functions>.

⁵⁷ NHA. 2009. Private Participation in National Highways, Motorways Tunnels and Bridges.

6.2.1.4 Sector Regulators

In 2009, the federal government, through its NHA, has issued a Policy and Regulatory Framework to encourage private sector participation in the road sector.⁵⁸

6.2.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Performance-based operation and maintenance contract	no data	no data
Engineering procurement and construction contract	no data	no data

It is noted that, in addition to the Concession Agreement, the NHA is also working on the standardization of prequalification criterion, request for proposals including evaluation criteria.

6.2.2 Institutional Capacity for Implementation

6.2.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The NHA provides a PPP pipeline of road projects on its website.⁵⁹ The combined pipeline, including data from the NHA and IJ Global, is listed in Table 6.6.

Table 6.6: PPP Pipeline of Road Projects in Pakistan

No	Project Name	Length (km)	Value (\$ million)
1	Islamabad Expressway Expansion PPP	no data	76
2	M-6 Hyderabad-Sukkur Motorway PPP	296	1,558
3	Lahore Southern Loop Road Project PPP	50	1,159

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⁵⁸ NHA. 2009. Private Participation in National Highways, Motorways Tunnels and Bridges..

⁵⁹ NHA website. Road PPP Pipeline. <http://nha.gov.pk/wp-content/uploads/2016/04/LIST-PPP-PROJECT-as-of-29-May-2017.pdf>.

Table 6.6 continued

No	Project Name	Length (km)	Value (\$ million)
4	Karachi–Lahore Motorway PPP	1152	7,000
5	M-9 Hyderabad–Karachi Motorway PPP	136	60
6	Karachi–Thatta Toll Road PPP	no data	100
7	Lodhran Sukkur Expressway PPP	no data	no data
8	Hyderabad–Badin Toll Road	no data	no data
9	Karachi Northern Bypass PPP	57	no data

km = kilometer, PPP = public–private partnership.

Sources: IJGlobal. <http://www.ijglobal.com> (accessed February 2018); National Highway Authority. <http://nha.gov.pk/en/> (accessed 21 February 2018).

6.2.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	4

There are currently four projects in preparation: Islamabad Expressway Expansion PPP, M-6 Hyderabad–Sukkur Motorway PPP, Lahore Southern Loop Road Project PPP, and Hyderabad–Badin Toll Road.

6.2.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	no data	no data	–
Unsolicited bids	no data	no data	–
Competitive bidding process	no data	no data	–
PPP projects currently in procurement	n/a	n/a	5

There are currently five projects under procurement: Karachi–Lahore Motorway PPP, M-9 Hyderabad–Karachi Motorway PPP, Karachi–Thatta Toll Road PPP, Lodhran Sukkur Expressway PPP, and Karachi Northern Bypass PPP. No new projects were procured in 2017 in the road sector in Pakistan.

6.2.3 Features of Past PPP Projects

6.2.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	6	6	-
PPP projects that reached financial close (\$ million)	425	425	-

Subsequent to the NHA passing a Policy and Regulatory Framework for private sector participation in the road sector in 2009, various projects reached financial close within a few years of introducing this regulatory framework. No new projects reached financial close in the road sector in 2017. The following road PPP projects reached financial close in the road sector prior to 2017:

- Habibabad Bridge (N-5), 2015;
- M-2 Islamabad to Lahore Motorway Refurbishment PPP (357 km), 2014;
- Jhirk Mullah Katiyar Bridge PPP, 2013;
- Khushalgarh Bridge PPP, 2012;
- Lakpass Tunnel (N-25), 2008; and
- 10 service areas (M-2) under a 15-year concession period.

6.2.3.2 Foreign Investor Participation

There has been no foreign investor participation in the road projects that have reached financial close to date.

6.2.3.3 Government Support

No information was available on types of government support.

The private sector has had an active role in PPP projects that reached financial close in the road sector between 1990 and 2017. This is evident in the equity ownership in the Jhirk Mullah Katiyar Bridge PPP and in the M-2 Islamabad to Lahore Motorway Refurbishment PPP. It is noted, however, that the M-2 Islamabad to Lahore Motorway Refurbishment PPP, a 20-year concession agreement for the refurbishment of the motorway, was signed in 2014 between Pakistan's NHA and Frontier Works Organization, which is an active-duty military administrative staff corps, and a major science and technology entity as party of the Pakistan Army. The organization has constructed numerous bridges, roads, tunnels, airfields, and dams in Pakistan, on the orders of the federal government.

6.2.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	2	2	–
Government-paid contracts	no data	no data	no data

6.2.3.5 Tariffs

Examples of current toll rates in Pakistan are provided in Table 6.7.

Table 6.7: Examples of Current Toll Rates in Pakistan (PRs)

Road type	Vehicle type 1: Car/Jeep/Land Cruiser/Pajero and Equivalent	Vehicle type 2: Wagon up to 24 Seats/Coaster/ Minibus	Vehicle type 3: Buses greater than 25 seats	Vehicle type 4: Two-axle, Three- axle Trucks, Tractor with Trolley	Vehicle type 5: 4/5/6 Axle Trucks (Articulated)
Super highway (M-9)	30	45	75	90	175
National highways	25	35	75	90	175
Motorways (M-1, M-2, M-3) ^a	25-345	25-460	50-715	50-1,025	80-1,745
Kohat Tunnel	40	145	180	180	275

^a Depends on the distance.

Source: National Highway Authority. <http://nha.gov.pk/en/> (accessed 21 February 2018).

6.2.4 Local Capabilities

Pakistan's road network consists of about 12,000 km of national highways and 93,000 km of provincial highways, and more than 100,000 km of district or urban roads. Despite the fact that the national highways (4.6% of the total road network) cater to 80% of the commercial traffic,⁶⁰ only 50% of them are considered to be in good or fair condition. According to the federal government, the estimated cost of the poor conditions of the local- and national-level

⁶⁰ NHA. <http://nha.gov.pk/en/>.

transportation infrastructure in Pakistan is around 8.5% of gross domestic product (GDP). A road maintenance account was established at the NHA in 2003. Incomes derived from tolls, traffic fines, or the government provide a funding for local and national road maintenance.⁶¹

In 2010, Pakistan joined the Central Asia Regional Economic Cooperation (CAREC) program, which includes a Transport and Trade Facilitation Strategy. The strategy plans to expand the CAREC transport network, with two corridors routing through Pakistan:⁶²

- Corridor 5: East Asia–Middle East and South Asia, which links the People’s Republic of China with South Asia and the Middle East. The accession of Pakistan to the CAREC Program enabled to the extension of the corridor to the Arabian Sea.
- Corridor 6: Europe–Middle East and South Asia connects the Russian Federation with South Asia and the Middle East.

6.2.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	no data	no data	no data
PPP projects that received export credit agency/international financing institution support	no data	no data	no data

6.2.6 Challenges

Challenges of PPP progress in the road sector are provided in Table 6.8.

Table 6.8: Challenges of PPP Progress in the Road Sector in Pakistan

Challenges	Currently Implemented Tackling Measures
Inconsistency between the policy and the institutional development: <ul style="list-style-type: none"> • lack of comprehensive strategy and action plan • inadequate institutional capacity • poor coordination between agencies on road safety 	
Inefficient transport operation and maintenance	Creation of the NHA in 1997. However, the NHA is only custodian of 4.6% of total national road network.

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⁶¹ ADB. 2015. Sector Assessment Transport.

⁶² ADB. 2015. CARTEC–Transport and Trade Facilitation 2020.

Table 6.8 continued

Challenges	Currently Implemented Tackling Measures
Road safety is a serious issue in Pakistan due to poor safety design, poor vehicle regulation, and inadequate traffic enforcement and driver training. There is therefore a need to adopt a national road safety strategy with clear action plan and targets.	As part of the CAREC TTFS, the federal government is committed to increase assistance and implement measures to provide a safe, affordable, and sustainable system in Pakistan.
Lack of federal and provincial agencies capacity. Suboptimal contract management and governance-related challenges have led to delays in construction and cost increases.	

CAREC TTFS = Central Asia Regional Economic Cooperation Transport and Trade Facilitation Strategy, NHA = National Highway Authority, PPP = public-private partnership.

Source: ADB. 2015. Sector Assessment Transport.

6.3 Railways

6.3.1 Regulatory Framework

6.3.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

6.3.1.2 Government Contracting Agency

Pakistan Railways is the national state-owned railway company of Pakistan. The railway company owns 1,881 km of track across Pakistan and operates freight and passenger service. Pakistan Railways reports to the Ministry of Railways, and overall, the control of Pakistan Railways, and policy and development of the railway network are also managed and administrated by the Ministry of Railways.

6.3.1.3 Sector-Specific Regulations

	2017	2017
Does the private partner have a legal right to charge users?	✓	✓

6.3.1.4 Sector Regulators

Policies are regulated by the Ministry of Railways.

6.3.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	no data	no data
Performance-based operation and maintenance contract	no data	no data
Engineering procurement and construction contract	no data	no data

6.3.2 Institutional Capacity for Implementation

6.3.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

No PPP pipeline was identified for the railway sector for Pakistan.

6.3.2.2 Project Preparation

No projects are currently under preparation for the Pakistan railway sector.

6.3.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	1	1	-
Competitive bidding process	-	-	-
PPP projects currently in procurement	n/a	n/a	-

There are currently no PPP projects under procurement for the railway sector in Pakistan. It is worth noting that the procurement strategy for the Karachi to Punjab railway was subject to a dispute between the Pakistan's Railway Ministry and the Infrastructure Project Development Facility (IPDF) in 2014. According to the IJGlobal database, in the end the project was funded by the public sector.

6.3.3 Features of Past PPP Projects

6.3.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	1	1	-
PPP projects that reached financial close (\$ million)	25	25	-

No rail projects reached financial close in Pakistan in 2017. Only the Kahna Kacha Flyover project reached financial close in the railway sector between 1990 and 2017. The Kahna Kacha Flyover is located at Railway Line Crossing Defence Road at Kahna Kacha Railway Station and is part of the Lahore Urban Transport Master plan of 2011–2030. An unsolicited proposal for development of this flyover in a PPP mode was submitted by M/s ZKB & Reliable JV to the Lahore Development Authority in August 2013. The estimated cost of the project is 2,277 million Pakistan rupees (PRs) in exchange for a 25-year concession to toll traffic at a base rate of PRs0.30 for cars. The project has been operational since 22 June 2016.

6.3.3.2 Foreign Investor Participation

The Kahna Kacha Flyover project, which was the only rail project that reached financial close between 1990 and 2017, did not have any foreign investor participation.

6.3.3.3 Government Support

The Kahna Kacha Flyover project was not eligible for government support. It is noted that the local government provided the land for the project.

6.3.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	1	1	-
Government-paid contracts	no data	no data	no data

6.3.4 Local Capabilities

The Vision 2025 plan published by the federal government plans to enhance railways share in the overall transport sector. In light of the Vision 2025 and the China–Pakistan Economic Corridor (CPEC), Pakistan Railways is expected to play a key role in the development of the sector.

The Asian Development Bank (ADB) sector assessment reports that, up to now, insufficient investment in upgrading rail infrastructure, rolling stocks, signaling, among others, has resulted in a significant decline in freight and passenger services.⁶³ In 1965, Pakistan Railways handled around 73% of the freight traffic, compared with less than 4% in 2015.

To reinvigorate Pakistan Railways, the current government has developed a strategy as part of the Pakistan Railways Vision 2025. This Railway Strategic Plan is to operationalize the targets set in the vision that would provide a long-term framework for railway sector development. In 2017, Pakistan Railways organized a consultative workshop on the Railways Strategic Plan with the cooperation of ADB.⁶⁴ The workshop concluded with the decision to focus on modernization or upgrade of Main Line 1 (ML-1), while planning was underway to modernize and rehabilitate ML-2 and ML-3 as well as new links.

The cost of upgrading Pakistan Railways' existing main line (ML-1) and the establishment of a dry port near Havelian is estimated to be around \$8.2 billion. The Government of the People's Republic of China plans to finance the upgrade project with a \$7 billion concessionary loan.⁶⁵

6.3.5 Challenges

Challenges of PPP progress in the railway sector are provided in Table 6.9.

Table 6.9: Challenges of PPP Progress in the Railway Sector in Pakistan

Challenges	Currently Implemented Tackling Measures
Political interference in decision making. The role of Pakistan Railways as a catalyst for economic development has received a setback due to significant under-investment by successive governments who preferred investment in road infrastructure at the cost of Pakistan Railways.	
Monopoly. Pakistan Railways is still the only enterprise providing rail service in the country.	Partnerships with the private sector are starting to be implemented, not on the infrastructure side yet, but in 2017, Pakistan Railways offered the private sector to run freight trains. However, the Ministry of Railways has denied the rumors about the privatization of Pakistan Railways.

Sources: ADB. 2015. *Sector Assessment Transport*; *The Nation*. March 2017. Railways Offers Private Sector to Run Freight Trains.

⁶³ ADB. 2015. *Sector Assessment Transport*. Manila.

⁶⁴ Dawn. 2017. ADB to help railways modernise infrastructure. 20 August. <https://www.dawn.com/news/1352732/adb-to-help-railways-modernise-infrastructure>.

⁶⁵ S. Rana. 2016. \$8.2b railtrack upgrade project wins go-ahead. *The Express Tribune*. 9 June. <https://tribune.com.pk/story/1119229/8-2b-railtrack-upgrade-project-wins-go-ahead>.

6.4 Ports

6.4.1 Regulatory Framework

6.4.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

6.4.1.2 Government Contracting Agency

Ministry of Maritime Affairs, previously named Ministry of Port and Shipping, is the main authority of the port sector. In particular, it is the ministry's role to declare and delimit the major ports and the constitution and power of authorities in the following ports: Karachi Port Trust, Port Bin Qasim, and Gwadar Port.

The ministry will also maintain technical control and to regulate functioning of subordinate organizations, Karachi Port Trust, Port Bin Qasim, Gwadar Port, and the Pakistan National Shipping Corporation.

6.4.1.3 Sector-Specific Regulations

	2016	2017
Does the private partner have a legal right to charge users?	✓	✓

In 2001, the Pakistan Merchant Shipping Ordinance 2001 replaced the Merchant Shipping Act of 1923, to reflect the fact that Pakistan became a member of the International Labour Organization (maritime labor international standards). This provides a framework and rules under which the government authorities will function in dealing with matters related to the shipping industry.

In addition, some ports have a special status. In 2017, for example, the Federal Board of Revenue decided to grant exemption of taxes for projects related to Gwadar, including the Gwadar International Airport, under the CPEC project. In the past, the Economic Coordination Committee of the cabinet had approved the grant for tax exemption under Gwadar Port Concession Agreement for operation and development of Gwadar Port for a period of 23 years to those establishing business in the free zone.⁶⁶

⁶⁶ S. Sarfraz. 2017. Economic Corridor: FBR to grant tax exemption to Gwadar projects. *Business Recorder*. 20 March. <https://www.brecorder.com/2017/03/12/338966/economic-corridor-fbr-to-grant-tax-exemption-to-gwadar-projects>.

6.4.1.4 Sector Regulators

The Ministry of Maritime Affairs in Islamabad is the central administrative authority of the federal government primarily assigned to facilitate the ports and shipping industry of Pakistan by providing policy guideline to encourage port development and growth in shipping while maintaining safety standards.

6.4.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	no data	no data
Performance-based operation and maintenance contract	no data	no data
Engineering procurement and construction contract	no data	no data

6.4.2 Institutional Capacity for Implementation

6.4.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	×	×

No projects in preparation for the port sector were identified.

6.4.2.2 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	1	1	-
Unsolicited bids	6	6	-
Competitive bidding process	3	3	-
PPP projects currently in procurement	n/a	n/a	-

No projects in procurement for the port sector were identified.

6.4.3 Features of Past PPP Projects

6.4.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	7	7	-
PPP projects that reached financial close (\$ million)	2,481	2,481	-

The following PPP projects have reached financial close:

- Second Container Terminal at Muhammad Bin Qasim Port, 2008
- Qasim Grain and Fertilizer Terminal, 2008
- Gwadar Port Phase I, 2007
- Pakistan International Container Terminal, 2002
- Karachi International Container Terminal, 1997
- Qasim International Container Terminal, 1995.

Port Qasim Authority, in 1994, tendered for the construction and operation of what would be Pakistan's first dedicated international container terminal, on a build-operate-transfer basis.

Gwadar Port was constructed in two phases. While technical and financial feasibility studies were completed in 1993, construction did not start until 2002. Port of Singapore Authority was given the concession for Gwadar Port's management and operations. After Gwadar Port became operational in 2008, the Port of Singapore Authority signed a 40-year concession agreement with the Gwadar Port Authority to operate a multipurpose terminal and carry out future expansion.

A joint venture formed the Karachi International Container Terminal, and Phase I of the terminal was operational in 1998. Karachi Port Trust, in order to maintain its edge over Port Bin Qasim as the primary port of Pakistan, sought proposals from private sector investors to develop the second modern, fully equipped international standard container terminal at East Wharf, Karachi Port. Pakistan International Container Terminal was formed as the terminal operating company and took over dedicated container terminals in October 2002.

6.4.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	6	6	-
PPP projects with foreign sponsor participation (as a share to the total number of port PPP projects)	86%	86%	-

6.4.3.3 Government Support

No data available.

6.4.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	3	3	-
Government-paid contracts	-	-	-

6.4.3.5 Risk Allocation

No data available.

6.4.4 Local Capabilities

Pakistan has three large seaports: Karachi Port, Muhammad Bin Qasim Port, and Gwadar Port. The port of Muhammad Bin Qasim is the oldest, while the Karachi Port is the busiest one, trading 98% of the overall international trade.

The Port of Gwadar is a newly developed deep-sea port and is considered as one of the deepest ports in Pakistan. It is strategically located between three increasingly important areas: heavily populated South Asia, the oil-rich Middle East, and the economically emerging and useful resource-weighted neighborhood of Asia. Since 2001, the port development has benefited from assistance provided by the People's Republic of China (PRC). The total cost of the undertaking is estimated at \$1.16 billion. The PRC has contributed about \$198 million for the primary phase involving construction of three shipping berths.⁶⁷

⁶⁷ Pakistan Cargo. <https://www.pakistancargo4u.co.uk/>.

6.4.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	–	–	–
PPP projects that received export credit agency/international financing institution support	1	1	–

6.4.6 Challenges

Challenges of PPP progress in the ports sector are provided in Table 6.10.

Table 6.10: Challenges of PPP Progress in the Ports Sector in Pakistan

Challenges	Currently Implemented Tackling Measures
Poor infrastructure reflects a lack of local capabilities.	Transfer of capacity and capabilities from working with the PRC.
Current infrastructure development led by the regional strategy of the PRC. Impact of the CPEC initiative and details of the agreement inked with PRC authorities are currently being challenged.	
As an example, as per the Gwadar Port Concession Agreement, China Overseas port holding company has 91% share in the gross revenue of terminal and marine operations and 85% share in the gross revenue from operations of the free zone.	

CPEC = China–Pakistan Economic Corridor, PPP = public–private partnership, PRC = People’s Republic of China.

Source: *Asia Times*. 2017. Bad Terms: Pakistan’s Raw Deal with China over Gwadar Port.

6.5 Airports

6.5.1 Regulatory Framework

6.5.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

6.5.1.2 Government Contracting Agency

Maximum allowed foreign ownership of equity in greenfield projects	100%	100%
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6.5.1.3 Government Contracting Agency

The National Aviation Policy of the Pakistan federal government defines “suitable Public–Private Partnership (PPP) models for the operations, management and development of airports” as one of its key objectives.⁶⁸

In this respect, the National Aviation Policy specifically states that

- (i) the Pakistan Civil Aviation Authority may enter into suitable PPP models for operation, management, and development of these airports;
- (ii) the Pakistan Civil Aviation Authority shall work with global airport management companies to find suitable PPP models to be followed for the operation and management of landside and terminal facilities of airports; and
- (iii) encouraging the private sector to “construct and/or operate new/existing airports, airstrips, water lakes for amphibian aircraft operations, helipads, heliports, including cargo complexes on build-own-operate, build-operate-transfer basis or any other suitable management arrangement, and to raise non-aeronautical revenues from these premises.”

Furthermore, the Pakistan Civil Aviation Ordinance 1982 (1982 Ordinance) empowers the Pakistan Civil Aviation Authority to, among other things, award contracts for construction, maintenance, and operation of airports.

The following departments/organizations are within the purview of the Aviation Division:

- Pakistan Civil Aviation Authority,
- Pakistan International Airlines Corporation,
- Airport Security Force, and
- Pakistan Meteorological Department.

6.5.1.4 Sector-Specific Regulations

	2016	2017
Does the private partner have a legal right to charge users?	✓	✓

⁶⁸ Government of Pakistan. National Aviation Policy 2015.

The Civil Aviation Ordinance 1960 (1960 Ordinance) provides for the control of manufacture, possession, use, operation, sale, import and export of aircraft, the control and regulation of air traffic services, and the control and development of aerodromes in Pakistan.

The 1982 Ordinance was passed for the establishment of the Pakistan Civil Aviation Authority for the purpose of promotion and regulation of civil aviation activities, and the development of infrastructure for safe, efficient, adequate, economical, and properly coordinated civil aviation transport services in Pakistan.

In 2015, the National Aviation Policy was formulated, in consultation with all stakeholders representing different segments of the aviation industry, followed by a series of deliberations at Pakistan Civil Aviation Authority and Aviation Division.

The policy serves as a road map for the implementation of safety, security, and quality standards. It also engenders bilateral liberalization; lowering taxes; stimulating economy through tourism, trade, agriculture; PPP; and infrastructural development.⁶⁹

6.5.1.5 Sector Regulators

The 1960 Ordinance empowers the federal government to, among other things, make rules for maintenance, licensing, and regulation of airports, and charge fees for the use of and for services provided at airports.

Pursuant to the 1982 Ordinance, the Pakistan Civil Aviation Authority is the public sector autonomous body which oversees and regulates all aspects of civil aviation in Pakistan.

The Government of Pakistan Aviation Division, in addition, spearheads strategy, policy, and oversight of all matters related to civil aviation.

It is noted that the scope of responsibilities of these two entities have not always been clear. In 2017, for example, a misunderstanding raised between the Privatisation Commission and the Pakistan Civil Aviation Authority, which directly issued a request for proposals from prospective investors for outsourcing the operation, management, and development of the New Islamabad International Airport, Lahore's Allama Iqbal International Airport, and Karachi's Jinnah International Airport. Even though the Pakistan Civil Aviation Authority is part of the government's privatization program, it is not among the entities that have been picked for early privatization. Section 25 of the Privatisation Ordinance of 2000 states that the Privatisation Commission will take decisions on matters pertaining to privatization, restructuring, and deregulation.⁷⁰

Pakistan's privatization program, started in 1991, is focused on attracting private sector capital and managerial expertise through the divestment of identified public sector entities. Later, on 28 September 2000, the Privatisation Commission Ordinance 2000 was promulgated, and the Privatisation Commission was converted into a corporate body, which strengthened its legal authority for implementing the government's privatization policy.

⁶⁹ Government of Pakistan. 2015. *National Aviation Policy*.

⁷⁰ *The Express Tribune*. 2017. Three Airports: CAA Thrusts Itself into Privatisation Role. 13 March.

6.5.1.6 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	no data	no data
Performance-based operation and maintenance contract	no data	no data
Engineering procurement and construction contract	no data	no data

6.5.2 Institutional Capacity for Implementation

6.5.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	×	×

6.5.2.2 Project Preparation

No projects in preparation for the airport sector were identified.

6.5.2.3 Procurement

No projects in procurement for the airport sector were identified.

6.5.3 Features of Past PPP Projects

6.5.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	1	1	–
PPP projects that reached financial close (\$ million)	40	40	–

Sialkot International Airport is the first PPP project in the aviation sector and reached financial close in 2006. It was designed to handle around 143,000 passengers a year. The main opportunity for this project was the increased exports it would allow, as the Sialkot belongs to the Export Triangle of Pakistan (together with Gujrat and Gujranwala). Traders previously had to send their merchandise through Karachi and Lahore. No airport PPP projects reached financial close in 2017.

Details of the arrangement are not available.

6.5.4 Local Capabilities

Pakistan is linked to almost all the countries of the world through six international airports: Karachi, Islamabad, Lahore, Peshawar, Quetta, and Multan. Karachi, considered as the gateway to Asia, has the most modern airport in the country. In total, there are 36 operational airports. Despite competition from a few private airlines, Pakistan International Airlines, the major public sector airline, carries approximately 70% of domestic passengers and almost all domestic freight traffic.

The 2015 National Aviation Policy⁷¹ reports that PPP models for operation and management of airports is a concept that is intended to be implemented for small, medium-sized, and large airports. This policy shift has been designed to improve the quality of service and revenue streams within the airport sector.

6.5.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	no data	no data	-
PPP projects that received export credit agency/international financing institution support	no data	no data	-

6.5.6 Challenges

Challenges of PPP progress in the airport sector are provided in Table 6.11.

⁷¹ Government of Pakistan. 2015. *National Aviation Policy*.

Table 6.11: Challenges of PPP Progress in the Airport Sector in Pakistan

Challenges	Currently Implemented Tackling Measures
<p>Aviation sector managed by a public entity (PCAA).</p> <p>Although the National Aviation Policy provides intention to introduce PPP models in the airport sector, the sector focus is on the use of public funding for the procurement of airport projects.</p> <p>While the Pakistan Civil Aviation Ordinance 1982 empowers the PCAA to award contracts for construction, maintenance, and operation of airports, it is unclear under the governing regime whether PCAA has the mandate to issue license with respect to outsourcing of airport services.</p>	<p>Privatization of the sector has been defined in the government strategy, but not as a short-term objective.</p>

PCAA = Pakistan Civil Aviation Authority, PPP = public-private partnership.

Source: Pakistan Civil Aviation Authority.

6.6 Energy

6.6.1 Regulatory Framework

6.6.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Power generation	100%	100%
Power transmission	100%	100%
Power distribution	100%	100%
Oil and gas	100%	100%

6.6.1.2 Government Contracting Agency

The Ministry of Water and Power is responsible for the overall administrative oversight relevant to the power sector. The National Electric Power Regulatory Authority (NEPRA), established pursuant to the NEPRA Act, plays the role of regulator with respect to the energy sector of the country as a whole. NEPRA has been mandated to regulate the provision of electric power services including determinations of electricity tariff, rates, charges, and other terms and conditions for supply of electric power services by the generation, transmission, and distribution companies.

Various agencies and companies are in charge of the distribution and transmission network and can contract with the private sector on behalf of the federal government. These include the Private Power and Infrastructure Board (PPIB), the Alternative Energy Development Board (AEDB), the National Transmission and Despatch Company, the Punjab Power Development Board, and the Water and Power Development Authority.⁷²

6.6.1.3 Sector-Specific Regulations

	2016	2017
Does the private partner have a legal right to charge users?	✓	✓

Even though the private partners under the energy market are permitted to sell directly to bulk-power consumers, energy is routed through the power purchaser to transmission and distribution companies, which then then distribute energy to the end-consumers. Therefore, even though the private partners get payments for the energy off-taken from them, they may not sell directly to end-consumers.

6.6.1.4 Sector Regulators

NEPRA was established as an autonomous body to regulate tariffs in the sector; to issue the relevant licenses, for example, generation and transmission licenses; and to ensure the sustainability of the sector in the long term.

The role of NEPRA constitutes the regulatory function required to ensure a competitive industry that has a reliable and adequate supply of electric power.⁷³

6.6.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✓	✓
Performance-based operation and maintenance contract	✓	✓
Engineering procurement and construction contract	✓	✓
Power purchase agreement	✓	✓
Capacity take-or-pay contract	✓	✓

⁷² Private Power and Infrastructure Board. 2011. Hydro Power Resources of Pakistan. Pakistan. <http://www.ppib.gov.pk/HYDRO.pdf>.

⁷³ National Electric Power Regulatory Authority. <http://www.nepra.org.pk/nepra.htm>.

6.6.2 Institutional Capacity for Implementation

6.6.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

PPP pipeline of energy projects is available for various different energy subsectors.

- A list of independent power producer (IPP) projects is available on the Private Power and Infrastructure Board website.⁷⁴
- A list of hydropower projects that are currently in the pipeline is available on the Water and Power Development Authority website.⁷⁵
- A list of renewable energy projects that are currently in the pipeline is available on the AEDB website; this is mostly populated for wind technology.⁷⁶
- A pipeline of IPP projects is available on the National Transmission and Despatch Company website.⁷⁷

PPP pipeline of energy projects in Pakistan is listed in Table 6.12.

Table 6.12: PPP Pipeline of Energy Projects in Pakistan

No	Project Name	Value (\$ million)
1	Arif Habib Sindh Wind Project (50 MW)	140.0
2	Athmuqam Hydropower Plant (350 MW)	No data
3	Buksh Energy Solar IPP (10 MW)	No data
4	Five 20 MW Sindh Solar PV Projects (IPP)	No data
5	Kaiga Hydropower Plant (545 MW) PPP	1,420.0
6	Kohala Hydropower (1,124 MW)	2,400.0
7	Mahl Hydropower (590 MW)	1,200.0

continued on next page

⁷⁴ Private Power and Infrastructure Board. Pipeline of IPP Projects in Pakistan. http://www.ppib.gov.pk/N_upcoming-ipp.htm.

⁷⁵ Pakistan Water and Power Development Authority. <http://www.wapda.gov.pk/>.

⁷⁶ Alternative Energy Development Board. <https://www.aedb.org/ae-technologies/wind-power/wind-investment-opportunities>.

⁷⁷ National Transmission and Despatch Company. <http://www.ntdc.com.pk/FutureProjects.php>.

Table 6.12 *continued*

No	Project Name	Value (\$ million)
8	Neckeherdim–Paur Hydropower Project (80 MW)	No data
9	Rajdhani Hydropower Plant (132 MW)	No data
10	Rohri Canal Hydro Power PPP (5 MW)	No data
11	Scatec Solar and Nizam Energy Solar Portfolio (300 MW)	600.0
12	Sharmai Hydro Power Plant (150 MW)	698.3
13	Turtonas–Uzghor Hydropower Plant (58 MW)	No data
14	Unipak Sind Wind Farm (49.5 MW)	125.0
15	3.6 GW Pakistan LNG-to-Power Projects	No data
16	Gwadar Coal-Fired Power Plant (300 MW)	800.0
17	Kandra Power CCGT (120 MW)	No data
18	Karachi CCGT Power Plant Phase I (1800 MW)	No data
19	Port Qasim Coal-fired Power Plant (700 MW)	1,000.0
20	Port Qasim Terminal 2 PPP	No data
21	Second Thar Coal Power (1440 MW)	1,500.0
22	Sindh CCGT Power Plant (900 MW)	1,000.0

CCGT = Combined cycle gas turbine, IPP = independent power producer, LNG = liquefied natural gas, MW = megawatt, PPP = public-private partnership, PV = photovoltaic.

Sources: IJGlobal. <http://www.ijglobal.com>; World Bank. PPI Database. <http://ppi.worldbank.org>.

6.6.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation		
Renewable energy generation	n/a	-
Thermal energy generation	n/a	-
Energy transmission and distribution	n/a	-

Currently there are no projects under preparation. This is in contrast with the substantial number of projects that have been in procurement for the energy sector to date. Various of the more recent energy projects are in the early stages of procurement, for instance, Athmuqam Hydropower Plant (350 MW) and Five 20MW Sindh Solar PV Projects (IPP) are in the pre-financing tendering stage. There are various challenges to the private sector participation in the energy sector which may be incumbering the preparation of new IPP projects in the sector.

6.6.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	8	8	-
Unsolicited bids	35	35	-
Competitive bidding process	14	14	-
License scheme	11	11	-
PPP projects currently in procurement			
Renewable energy generation	n/a	n/a	18
Thermal energy generation	n/a	n/a	10
Energy transmission and distribution	n/a	n/a	-

6.6.3 Features of Past PPP Projects

6.6.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)			
Renewable energy generation	27	31	4
Thermal Energy generation	39	41	2
Energy transmission and distribution	-	-	-
PPP projects that reached financial close (\$ million)			
Renewable energy generation	4,231	8,228	3,997
Thermal Energy generation	9,513	13,313	3,800
Energy transmission and distribution	-	-	-

PPP project that reached financial close include wind and hydro projects in the renewable generation sector; coal, gas, and diesel generation projects in the thermal generation sector.

The following projects have reached financial close.

Renewable generation:

- Gal Ahmed Wind Farm (50 MW), 2015
- Khuti Kun Wind Farm (49.5 MW), 2015
- Gulpur Hydropower Plant (102 MW) PPP, 2015
- New Bong Escape Hydropower Plant, 2009

The Gal Ahmed Wind Farm is a wind IPP project which has been developed in Pakistan under a 20-year PPA with the Central Power Purchasing Authority. The project has a guarantee with the federal government, who is the awarding authority for the project, for the offtake contract.

The New Bong Escape Hydropower Plant was the first hydropower IPP project in Pakistan. The electricity generated is purchased by the National Transmission and Despatch Company through a PPA for a 25-year period. The federal government is the awarding authority for the period.⁷⁸

Thermal Generation:

- Hub Coal Power Plant (1,320 MW), 2018
- Sahiwal Coal-Fired Power Plant (1,320 MW), 2017
- Daharki Gas-Fired Combined Cycle Power Station (175 MW), 2008
- Atlas Power Plant (225 MW), 2007

The Hub Coal Power Plant is a priority IPP project under the China-Pakistan Economic Corridor investment program. The federal government, through the Ministry of Water and Power, was the contracting authority for the IPP project, with the Private Power and Infrastructure Board playing a supervising agency role. A PPA was signed with the Central Power Purchasing Authority for a 30-year term.

The Atlas Power Plant in Sheikhpura, Pakistan, is an IPP project developed to supply baseload power from diesel to the national grid. The project was developed with the private sector signing a PPA with the Central Power Purchasing Authority.

These projects illustrate the establishment of the IPP model of power generation in Pakistan, and the government intends to continue to roll out similar projects.

6.6.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)			
Renewable energy generation	14	17	3

⁷⁸ IJGlobal. <http://www.ijglobal.com>.

	1990– 2016	1990– 2017	In 2017
Thermal energy generation	20	22	2
Energy transmission and distribution	-	-	-
PPP projects with foreign sponsor participation (as a share to the total number of energy PPP projects)			
Renewable energy generation	52%	55%	75%
Thermal energy generation	51%	54%	100%
Energy transmission and distribution	0%	0%	0%

6.6.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	no data
Government guarantees:	28	28	-
Minimum traffic/revenue guarantees	no data	no data	no data
Availability-/performance-based payment basis	no data	no data	no data

According to the Power Generation Policy of 2015, the Private Power and Infrastructure Board issues a federal government guarantee backing up the payment obligation of a federal power purchaser, in most cases the Central Power Purchasing Authority, and/or provincial governments in the projects where the tariff is determined by NEPRA.

6.6.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	-	-	-
Government-paid contracts	62	64	2

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	no data	no data
Advertising	no data	no data

6.6.3.5 Tariffs

NEPRA is responsible for setting the tariffs paid for electricity by customers. The PPP model in the power generation sector typically follows an IPP framework where IPPs enter into a power purchase agreement (PPA) with a state-owned offtaker. The tariffs are regulated by NEPRA with an aim of providing a suitable rate of return for private investors. In some cases, there are other power projects that are procured as build–operate–transfer projects. The majority of the PPP projects consist of IPPs receiving a tariff through a long-term PPA.⁷⁹

To facilitate the development of these technologies, NEPRA has issued up-front tariffs for generation from the respective technologies. Since solar projects have been proposed to be developed through a competitive bidding process, NEPRA does not issue tariff rates for the technology.

Examples of current toll rates in Pakistan are shown in Table 6.13.

Table 6.13: Examples of Current Electricity Tariff Rates in Pakistan

Type	PRs/kWh
Gas	7.6973
Coal	6.1311
Biomass	7.0011
Wind	8.6066

kWh = kilowatt-hour, PRs = Pakistan rupees.

Source: National Electric Power Regulatory Authority. <http://www.nepra.org.pk/>.

6.6.3.6 Risk Allocation

No data available.

⁷⁹ IJGlobal. <http://www.ijglobal.com>; National Transmission and Despatch Company. <http://www.ntdc.com.pk/FutureProjects.php>; ADB. Sustainable Energy Reform Program. <https://www.adb.org/sites/default/files/linked-documents/47015-002-ssa.pdf>.

6.6.4 Local Capabilities

Power sector reforms have been continuing in the Pakistan market since 1992, although the intended benefits of these reforms have yet to be achieved.

These reforms refer to the unbundling of the monopoly of the Water and Power Development Authority into 10 regional distribution companies, 4 government-owned thermal power generation companies, a transmission company that is also licensed as the system operator, and a single buyer and seller of electricity licensed as the market operator—the Central Power Purchasing Authority.

Karachi Electric Supply Company plays a dominant role in the power sector due to its role as the power generator and distributor in the Karachi area. The regulatory environment and power policy in Pakistan promotes the development of IPPs, which consequently generate a substantial portion of the country's power.⁸⁰

Various other agencies and stakeholders are responsible for implementing policy directives, supporting the development of various power technologies, and to act as a one-stop organization on behalf of the government. These include the AEDB, which is responsible for the promotion and support of the development of renewable energy technologies, and the PPIB, which is responsible for the development of private sector participation (such as IPPs) in power generation.⁸¹

The CPEC investment program has seen the development of numerous IPPs with PRC institutions providing debt and equity in the Pakistan energy sector.⁸²

In terms of national energy policy, the government approved the National Power Policy in 2013, and the Power Generation Policy of 2015 with the intent of meeting the energy needs of current and future generations in Pakistan.

6.6.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	33	39	6
PPP projects that received export credit agency/international financing institution support	38	42	4

⁸⁰ ADB. Sustainable Energy Reform Program. <https://www.adb.org/sites/default/files/linked-documents/47015-002-ssa.pdf>; Private Power and Infrastructure Board. 2011. Hydro power Resources of Pakistan. Pakistan. <http://www.ppib.gov.pk/HYDRO.pdf>.

⁸¹ Alternative Energy Development Board; Private Power and Infrastructure Board. http://www.ppib.gov.pk/N_upcoming_ipps.htm.

⁸² IJGlobal. <http://www.ijglobal.com>.

6.6.6 Challenges

Challenges of PPP progress in the energy sector are provided in Table 6.14.

Table 6.14: Challenges of PPP Progress in the Energy Sector in Pakistan

Challenges	Currently Implemented Tackling Measures
Gap between end users and cost-recovery tariffs have caused payment arrears to IPPs and private sector players. Concerns about electricity payments have limited private sector participation.	NEPRA has commenced with providing investors the opportunity to participate in a competitive environment and the right framework to improve the efficiency of energy enterprises.
Lack of transparency in operation and payment mechanisms leading to inefficient energy strategies.	Increased efforts to improve transparency through key players, regulations, and policies in the sector may encourage efficiency improvements and private sector interest in the sector. Zero tolerance has been adopted toward corruption and poor performance. Transparency through access to information via public websites.
Constraints on the capacity of the transmission system. The transmission infrastructure cannot cope with large-scale investment in electricity generation, as is the case with rolling out public and private sector energy generation projects.	According to the Power Generation Policy of 2015, federal government has planned to increase private sector participation in developing and expanding the transmission infrastructure.
Lack of projects in preparation	New law introduced In 2017 to clarify PPP procurement in Pakistan.

IPP = independent power producer, NEPRA = National Electric Power Regulatory Authority, PPP = public-private partnership.

Sources: ADB. Sustainable Energy Reform Program. <https://www.adb.org/sites/default/files/linked-documents/47015-002-ssa.pdf>; Ministry of Water and Power. 2015. Power Generation Policy 2015. Islamabad.

6.7 Social Infrastructure

6.7.1 Regulatory Framework

6.7.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Healthcare infrastructure	100%	100%

	2016	2017
Healthcare services	100%	100%
Education infrastructure	100%	100%
Education services	100%	100%
Government buildings	100%	100%
Prisons and correction centers	100%	100%
Social housing	100%	100%
Sport and leisure facilities	100%	100%

6.7.1.2 Government Contracting Agency

Each ministry in Pakistan is responsible for PPPs in its respective sector. Line ministries, federal bodies, and provincial and local authorities as well as state-owned enterprises (SOEs) are the contracting parties on behalf of the federal government with private parties. They will therefore be responsible, mainly or in conjunction with other bodies, for the identification, selection, sponsorship, preparation, tendering, and monitoring of PPP projects in their sectors.⁸³

Various government authorities have been involved in contracting social PPPs, some examples include:⁸⁴

- Province of Punjab (Awarding Authority);
- Province of Sindh (Awarding Authority);
- Youth Affairs, Sports, Archaeology and Tourism Department (Punjab Province);
- Primary and Secondary Healthcare Department (Punjab Province);
- Local Government and Community Development Department (Punjab Province);
- Housing Urban Development and Public Health Engineering Department (Punjab Province);
- Communication and Works Department (Punjab Province);
- Education and Literacy Department (Sindh Province); and
- Health Department (Sindh Province).

There are numerous government authorities, line ministries, and SOEs that are able to act as the contracting authority for a social PPP project.

⁸³ Government of Pakistan. 2010. Pakistan Policy on Public Private Partnerships. Islamabad.

⁸⁴ PPP Unit Sindh. http://www.pppunitsindh.gov.pk/projects_dpa.php; PPP Cell Punjab. http://www.ppp.punjab.gov.pk/pipeline_projects.

6.7.1.3 Sector-Specific Regulations

According to the Pakistan Policy on Public Private Partnerships, which provides the basis for PPP regulatory framework in Pakistan, the social sectors (education, healthcare, and real estate) remain unregulated. This is in contrast to the energy sector in Pakistan which has been formally regulated since the early 1990s.

6.7.1.4 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	no data	no data
Performance-based operation and maintenance contract	no data	no data
Engineering procurement and construction contract	no data	no data

6.7.2 Institutional Capacity for Implementation

6.7.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

As outlined in the country profile, the provincial governments have been substantially active in the promotion and development of PPPs. This is especially true for the Provinces of Punjab, Sindh, and Khyber Pakhtunkhwa. PPP pipelines are available to a greater extent on a provincial level in comparison to a federal level. The PPP pipeline of social projects is available on the PPP Cell website on behalf of the Province of Punjab, and the PPP Unit on behalf of the Province of Sindh.⁸⁵ The pipeline of social infrastructure projects is listed in Table 6.15.

⁸⁵ PPP Unit Sindh. http://www.pppunitsindh.gov.pk/projects_dpa.php; PPP Cell Punjab. http://www.ppp.punjab.gov.pk/pipeline_projects.

Table 6.15: PPP Pipeline of Social Infrastructure PPP Projects in Pakistan

No	Project Name	Sector	Status	Value (\$ million)
1	Sindh Grain Storage Facilities PPP	Agriculture	Pre-tendering	132
2	PIMS National Institute of Dentistry	Healthcare	Tendering	no data
3	Lahore Claims Hospital Rehabilitation Programme	Healthcare	Tendering	1,500
4	Hassan Hospital PPP	Healthcare	Tendering	no data
5	PIMS Centre of Liver Disease and Transplant PPP	Healthcare	no data	no data
6	Model Town Housing Scheme Sargodha	Housing	no data	11.45
7	Multipurpose Parking Plaza and Hostel in Nishtar Park Sports Complex and Establishment of Sports Complex Multan, Lahore	Multipurpose	no data	23
8	Establishment of Nuclear Medicine Centre	Healthcare	no data	0.7

PPP = public-private partnership.

Sources: IJGlobal. <http://www.ijglobal.com>; World Bank. PPI Database. <http://ppi.worldbank.org>.

6.7.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

Currently, no projects are under preparation in the social infrastructure sector in Pakistan.

6.7.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	no data	no data	no data
Unsolicited bids	no data	no data	no data

	1990– 2016	1990– 2017	In 2017
Competitive bidding process	no data	no data	no data
PPP projects currently in procurement	n/a	n/a	8

Several national PPP and regional PPP projects are currently in procurement (see Table 6.15 for the list of projects). The majority of the projects that are currently in procurement are in the healthcare sector.

6.7.3 Features of Past PPP Projects

6.7.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	1	1	-
PPP projects that reached financial close (\$ million)	7	7	-

The Punjab Grain Storage Facilities PPP was a solicited proposal for the development of multigrain storage and handling facilities under a 10-year build-own-transfer contract. The project was procured by the Food Department of the Government of Punjab. The private operator receives fixed service charges from the government agency. The project is indicative of the development of the PPP model within the provinces in Pakistan through different ministries and government agencies.⁸⁶

6.7.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	1	1	-
PPP projects with foreign sponsor participation (as a share to the total number of social infrastructure PPP projects)	100%	100%	-

LT Foods, a company incorporated in India, has a majority equity holding in the Punjab Grain Storage Facilities PPP.

⁸⁶ IJGlobal. <http://www.ijglobal.com>.

6.7.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	no data
Government guarantees:	no data	no data	no data
Minimum traffic/revenue guarantees	-	-	-
Availability-/performance-based payment basis	1	1	-

6.7.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	-	-	-
Government-paid contracts	1	1	-

6.7.3.5 Risk Allocation

No data available for typical risk allocation mechanisms.

6.7.4 Local Capabilities

According to the Pakistan PPP Policy, ministries and federal bodies are responsible for procuring national-level PPP projects, whereas local facilities, such as PPP hospitals or schools in provincial jurisdictions, are procured by local governments and departments.

Private sector involvement in the development of social infrastructure projects, through the use of PPP models, had seen seven PPP projects reach financial close between 1990 and 2017. Continued involvement of the private sector in delivering PPP projects in Pakistan is evident in eight social infrastructure PPP projects that are currently in procurement.

6.7.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	no data	no data	no data
PPP projects that received export credit agency/international financing institution support	no data	no data	no data

6.7.6 Challenges

Challenges of PPP progress in the social infrastructure sector are provided in Table 6.16.

Table 6.16: Challenges of PPP Progress in the Social Infrastructure Sector in Pakistan

Challenges	Currently Implemented Tackling Measures
Regulatory framework capacity	
Lack of experience and regulatory environment in social infrastructure development	Very few PPPs have been announced, with very few having been developed in the social infrastructure sector. There is potential in the healthcare sector since numerous projects are in the pipeline; however, there seems to be a lack of projects reaching financial close.
Misalignment of PPP support for social infrastructure projects between the various provinces in Pakistan	The majority of the social infrastructure PPPs are in the provinces of Punjab and Sindh. However, there are few social infrastructure projects in the Khyber Pakhtunkhwa province. Improved alignment of policy, regulation, and PPP support from various government authorities would promote wider social infrastructure PPP project development in Pakistan.

PPP = public-private partnership.

Sources: IJGlobal. <http://www.ijglobal.com>; World Bank. PPI Database. <http://ppi.worldbank.org>.

6.8 Other Sectors

PPP pipeline of projects from other sectors is provided in Table 6.17.

Table 6.17: PPP Pipeline of Projects from Other Sectors in Pakistan

No.	Project Name	Sector	Location	Value (\$ million)
1	Karachi Waste to Energy	Waste	Karachi	80
2	Islamabad Solid Waste Management PPP	Waste	Islamabad	no data
3	Karachi Desalination Plant	Water	Karachi	300
4	Karachi to Lahore Natural Gas Pipeline PPP	Oil and Gas	Karachi–Lahore	2,500
5	Punjab Hub Power Oil-Fired Power Plant (225 MW)	Oil-fired		225
6	Gujranwala Oil-Fired Power Plant IPP (200 MW)	Oil-fired		204
7	Liberty IPP (235 MW)	Oil-fired		no data

MW = megawatt, PPP = public–private partnership.

Sources: IJGlobal. <http://www.ijglobal.com>; World Bank. PPI Database.

In terms of the water sector in Pakistan, the Karachi Desalination Plant was announced in 2008 by the authorities. The desalination plant was planned to be procured as a PPP. However, this project was mothballed in 2009 and there have been no developments since.

A recent development in the water sector in Pakistan has been the request for proposals for three projects in relation to the Safe Drinking Water Program of the Government of Punjab. Each project entails the use of private sector capacity to develop a desalination plant, and distribute and store water services. However, the program seems to be publicly funded and has not been considered as a PPP initiative.

The Punjab Hub Oil-Fired Power Plant and the Gujranwala Oil Power Plant IPP were planned to be procured as IPPs which would provide and sell electricity through a PPA to the national grid. These projects were mothballed in 2008 and 2007, respectively, and have not progressed since these years.

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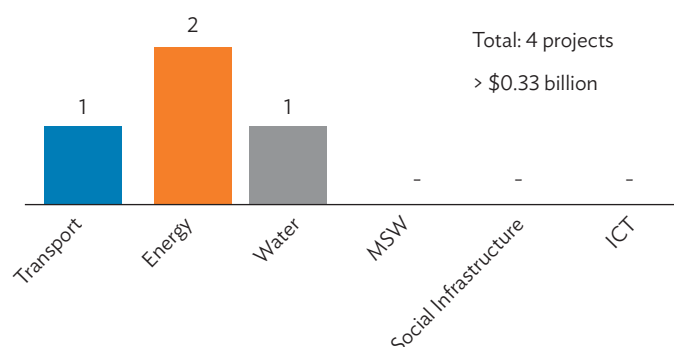
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7. PAPUA NEW GUINEA

To date, four public–private partnerships (PPPs) have been developed in Papua New Guinea¹ (PNG), although the first two PPPs reached financial close long before the introduction of any of PNG’s PPP Policy and recent commencement of PNG’s PPP Act. The first was a diesel-fired power plant in 1996, and the second was the rehabilitation of a water treatment plant the following year. Both projects had the involvement of state-owned enterprises (SOEs) and foreign investors. The third was a hydropower plant project, and the most recent one is a port PPP project which was awarded in 2017.

Figure 7.1: PPP Projects in Papua New Guinea that Have Reached Financial Close, 1990–2017



ICT = information and communication technology, MSW = municipal solid waste, PPP = public–private partnership.

Sources: IJGlobal. *IJGlobal Project Finance and Infrastructure Journal*. <http://www.ijglobal.com>; World Bank Group. 2015. *World Bank Asia Pacific Private Participation in Infrastructure (PPI) Database*. <http://ppi.worldbank.org/> (accessed 5 February 2018).

Following the endorsement of the National Public Private Partnership Policy in 2008 (PPP Policy), PNG introduced its first PPP law in 2014, which calls for institutions and processes to be established in line with internationally accepted PPP practice. The Public Private Partnership Act 2014 (PPP Act) was passed by the National Parliament in September 2014 and certified by the Acting Clerk and the Speaker of the National Parliament in October 2014.

¹ The *PPP Monitor* is envisaged to be a dynamic product and comments for improving data quality are welcome and can be incorporated in future editions. It should also be noted that the report is using standardized definitions which may not match a particular developing member country’s definitions. For the meaning of each indicator, please refer to the Appendix.

The PPP Act was notified in the National Gazette and commenced operation on 31 January 2018. As such, PPP structures are now regulated by specific PPP laws in PNG, although the PPP Act also specifically preserves existing regimes for the grant of rights without seeking to override existing contractual arrangements which were previously developed on an individual basis.

However, the regulatory framework for the PPP Act requires further development and funding, and may not be implemented before it is amended. For instance, there is currently no operational PPP Centre and, despite the recent commencement of the PPP Act and existence of a PPP project pipeline developed by the PNG Department of Treasury in 2015, there is no operational institution tasked with managing the PPP project development process.

Consequently, the regulatory and institutional arrangements supporting PPP development require further development. The institutional capacity to develop, procure, and implement PPPs is therefore limited, as is the Government of PNG's ability to fund new infrastructure, both relying heavily on assistance from the international development banks, which has resulted in very few PPPs being developed to date. Nevertheless, three PPP projects are understood to be currently under preparation and one in procurement (Figures 7.2 and 7.3), which, if developed through a transparent and competitive process, will constitute a major step forward for PPP in PNG. For instance, with the approval of the government and support of the Asian Development Bank (ADB) as mandated transaction advisor, a proposed PPP is being developed with PNG's National Airports Corporation for the brownfield development and expansion of Port Moresby (Jacksons) International Airport, although the PPP airport project is currently not being undertaken under the PPP Act framework.

Figure 7.2: PPP Projects in Papua New Guinea Currently in Preparation, 2017

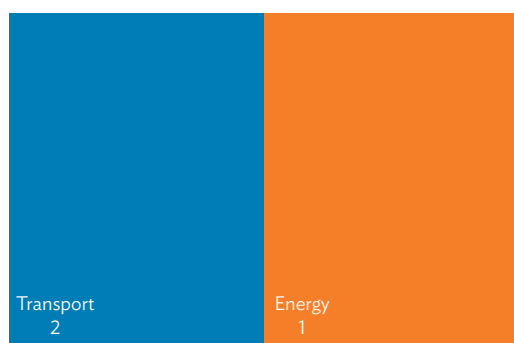


Figure 7.3: PPP Projects in Papua New Guinea Currently in Procurement, 2017



Source: Mott MacDonald.

Key Developments from 2016

The main change from 2016 in the PPP environment in PNG was the commencement of the PNG PPP Act in January 2018.

7.1 Country Profile

7.1.1 Regulatory Framework

7.1.1.1 PPP Law

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

	1990– 2016	1990– 2017	In 2017
Number of PPP projects that reached financial close under the latest PPP law	-	-	-

The Public Private Partnership Act 2014 (PPP Act) was passed by the National Parliament in September 2014 and certified by the Acting Clerk and the Speaker of the National Parliament in October 2014. The PPP Act was notified in the National Gazette and commenced operation on 31 January 2018.

The indicator marked in yellow in the table above reflects the fact that the PPP Act has only been in operation since January 2018. No PPP project has yet been developed under it.

The primary purposes of the PPP Act include

- the procurement and delivery of infrastructure facilities and services through PPP arrangements;
- to give power to certain public bodies to enter into PPP arrangements;
- the establishment of a PPP Centre for PNG with functions including the promotion, coordination, and analysis of PPP arrangements; and
- the establishment of a PPP Steering Group and a PPP Forum for PNG.

The PPP Act specifically applies to the following public bodies:

- the Independent State of PNG (State),
- provincial- or local-level governments, and
- state-owned entities.

The PPP Act

- applies to the grant of a license, including a concession or a lease as part of a PPP arrangement; and
- does not apply to the grant of a license, lease, or right that is subject to any other legislation and the grant of such license, lease, or right must be made in accordance with that other legislation.

An agreement for a PPP arrangement may include

- terms and conditions in relation to the performance by the partner of obligations under the arrangement; and
- provision for the charging of a user fee or the payment by a relevant public body, or a combination of the two.

Under the PPP Act, “infrastructure” is defined as any asset, facility, or service for the benefit of members of the public, including those specified in Schedule 2 of the PPP Act.

Schedule 3 of the PPP Act specifies the arrangements that are classified as PPP arrangements for the purposes of the PPP Act. A PPP arrangement means an arrangement with a person other than a Relevant Public Body for the performance of functions in relation to

- the design and construction of infrastructure and the operation of services and provision of finance related to it,
- the construction of infrastructure and the provision of finance related to it,
- the design and construction of infrastructure and the provision of finance related to it, or
- the provision of services relating to infrastructure for at least 5 years and the provision of finance related to the services.

Schedule 3 explicitly excludes arrangements

- of less than a referral threshold to be specified by regulation in the future,
- mining projects under the Mining Act 1992 (and associated development agreements),
- gas projects and petroleum projects under the Oil and Gas Act 1998 (and associated development agreements), and
- where the infrastructure project is predominantly comprised of expenditure deemed to be “income tax” under the Income Tax Act 1959.

However, the responsible minister, following a recommendation of the PPP Steering Group, may amend Schedule 3 by adding or excluding any arrangement or class of arrangements, by notice in the National Gazette.

Any arrangements or agreements which are entered into prior to the effective date of the PPP Act will remain in force as if the agreement or arrangement were made under the PPP Act. Where there are any inconsistencies between that arrangement or agreement and the PPP Act, the terms of the arrangement or agreement prevail.

7.1.1.2 PPP Types

	2016	2017
Number of PPP types defined in the PPP regulations	no data	no data

7.1.1.3 Eligible Sectors

	2016	2017		2016	2017
Transport			Energy		
Roads	✓	✓	Power generation	✓	✓
Railways	✓	✓	Power transmission	✓	✓
Ports	✓	✓	Power distribution	✓	✓
Airports	✓	✓	Oil and gas	✓	✓
Water and wastewater	✓	✓	Information and communication technology	✓	✓
Municipal solid waste	✓	✓	Social infrastructure	✓	✓

The indicators marked in yellow in the table above reflect the fact the PPP Act was not in force in 2016 and 2017.

The PPP Act specifies the infrastructure which may be the subject of PPP arrangements. It includes (i) assets, facilities, and services for the provision of power or electricity (including generation, transmission, distribution, and supply); (ii) gas transmission and distribution; (iii) transport (including airports, rail, roads, bridges, tunnels, ports, and dams); (iv) telecommunications; (v) water; (vi) real property; (vii) health (including hospitals); (viii) correctional management (including prisons); (ix) education; and (x) any other project or sector which may be notified by the responsible minister in the National Gazette.

The PPP Act specifically excludes arrangements of a size or value lower than any referral threshold which may be set in a regulation made under the PPP Act (Regulation), mining projects under the Mining Act 1992 (and associated development agreements), gas and petroleum projects under the Oil and Gas Act 1998 (and associated development agreements), and any infrastructure project in which the expenditure is predominantly comprised of expenditure deemed to be income tax under section 219C of the Income Tax Act 1959. The responsible minister may also exclude an arrangement or class of arrangements from being a PPP arrangement under the PPP Act by National Gazette notice.

The four PPPs that were undertaken in PNG were in the power generation, water distribution, and ports sectors.

7.1.1.4 Other Applicable Restrictions

	2016	2017
Project funding structure	no data	no data
Project capital investment size	no data	no data

7.1.1.5 Unsolicited Bids

	2016	2017
Acceptance of unsolicited proposals	✓	✓
Eligibility of the project proponent to have:		
Competitive advantage at bid evaluation	×	×
Swiss challenge	×	×
Compensation of the project development cost	×	×
Government support for land acquisition and resettlement cost	×	×
Government support in the form of viability gap fund and guarantees	×	×

In PNG, the two PPPs that reached financial close in the 1990s were unsolicited proposals. Notably however, those projects were closed in 1996 and 1997, prior to the introduction of the PPP Policy and recent commencement of the PPP Act.

The PPP Act does not specify the preferential treatment that may be afforded to unsolicited bidders for having spent their own resources to develop a feasibility study or business case for such projects.

The PPP Policy contemplated that the process for consideration of an unsolicited bid, and the preferential treatment of unsolicited bidders, would be defined in due course.

7.1.1.6 State-Owned Enterprise Participation

	2016	2017
Are institutional PPP arrangements allowed (e.g., joint venture between government or state-owned enterprises and private firms as a special purpose vehicle company)?	✓	✓

	1990– 2016	1990– 2017	In 2017
Institutional PPP projects (number)	2	2	-
Institutional PPP projects (as a share to the total number of PPP projects)	50%	50%	0%

To date, SOEs have played a significant role in PPP development in PNG. Half of the projects implemented to date had SOE involvement. Currently, it is understood that some SOEs are individually creating pipelines for PPP projects in their respective sectors. The active SOEs include Kumul Consolidated Holdings, PNG Power Limited (PPL), National Airports Corporation, PNG Water, and PNG Ports.

7.1.1.7 Land Rights

	2016	2017
Which of the following is permitted to the private partner:		
Transfer land lease/use/ownership rights to third party	no data	no data
Use leased/owned land as collateral	no data	no data
Mortgage leased/owned land	✓	✓
Is there a legal mechanism for granting wayleave rights, for example, laying water pipes or fiber cables over land occupied by persons other than the government or the private partner?	✓	✓
Is there a land registry/cadastre with public information on land plots?	×	×
Which of the following information on land plots is available to the private partner:		
Appraisal of land value	×	×
Landowners	×	×
Land boundaries	×	×
Utility connections	×	×
Immovable property on land	×	×
Plots classification	×	×

Approximately 97% of land in PNG is held under customary ownership for which there is generally no recorded title. Only the state may acquire customary land from traditional owners. If a foreign person requires access to customary land, it would need to be acquired from the traditional owners by the state and leased from the state.

All other land in PNG is alienated land held by the state (i.e., land that at some time in the past has been acquired by the state). Alienated land is subject to the Land Act 1996.² Alienated land can be held as freehold or leasehold from the state. Noncitizens are not permitted to own freehold land in PNG.

Most dealings in land are by way of leasehold from the state via state leases. State leases may be registered under the Land Registration Act (Chapter 191). Once registered, state leases generally give the leaseholder indefeasibility of title (subject to certain exceptions) and a certificate of title is issued. Encumbrances such as mortgages may be registered on the title and take priority over unregistered dealings. Any dealing involving land being granted or transferred to a foreign person or a corporate entity requires ministerial approval.

PNG also has a lease-leaseback scheme that is designed for the owners of customary land to develop their land for special agricultural or other business projects. Under the Land Act, customary landowners (either in their own name or through a special purpose corporation or incorporated land group, which acts as an agent for the customary landowners) may dispose of their land to the state, which then grants a special agricultural or business lease back to one or more incorporated land groups in their capacity as agent for the customary landowners.

The country's 7 million citizens speak more than 840 distinct languages (this accounts for about 10% of the world's languages).

Indeed, indigenous individuals retain strong identity and kinship ties to some small clans and kinship networks, each with their own long-standing traditions, close connection to the land, and constitutional rights in PNG's National Constitution. The strong kinship ties have played an important role traditionally in building social capital and resilience within many communities.

However, the lack of formal land registration and high granulation in social mapping makes the acquisition of—and compensation for—customary land a time-consuming, costly, and often contested process (Nelson and Valikai 2014).

Under the PPP Act, a relevant public body may grant, transfer, convey, or assign an interest in real or personal property or a leasehold interest owned or held by that relevant public body to a company to enable it to carry out its financing functions under the PPP arrangement, subject to certain ministerial approvals. A relevant public body may also take such steps as may otherwise be available to it to assist a partner to obtain rights related to land (and to enjoy those rights).

For compliance with PNG's Constitution and the Land Act, the PPP Act deems the purpose and reason for which the PPP Act permits any compulsory acquisition of land (or rights in land) under PPP arrangements to be a reason which is reasonably justified in a democratic society that has a proper regard for the rights and dignity of humankind.

² The Land Act provides that all land in Papua New Guinea, which is not customary land, are the property of the state subject to any estates, rights, titles, or interests in force under any law.

7.1.1.8 Environmental and Social Issues

	2016	2017
Is there a local regulation establishing process for environmental impact assessment (EIA)?	✓	✓
Is there a legal mechanism for the private partner to limit environmental liability for what is outside of its control or caused by third parties?	✓	✓
Is there a local regulation establishing a process for social impact assessment?	✓	✓
Is there involuntary land clearance for PPP projects?	✓	✓

The Environment Act 2000 provides the administrative mechanism to evaluate impacts on the environment through an environmental approval and permitting system.³ Under the Environment Act, certain activities may not be undertaken without an environment permit. They include (i) construction of works, land clearance, demolition, excavation, or other works in relation to land or water; (ii) installation, operation, or maintenance of plant or equipment; (iii) activities for the purpose of extracting or harvesting natural resources; and (iv) release of contaminants to air, land, or water, in connection with any of these activities. In May 2010, the Act was amended, restricting landowners' rights in respect of projects ruled to be of national interest.

7.1.1.9 Foreign Investor Participation Restrictions

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Transport			Energy		
Roads	n/s	n/s	Power generation	n/s	n/s
Railways	n/s	n/s	Power transmission	n/s	n/s
Ports	n/s	n/s	Power distribution	n/s	n/s
Airports	n/s	n/s	Oil and gas	n/s	n/s
Water and wastewater			Municipal solid waste	n/s	n/s
Bulk water supply and treatment	n/s	n/s	Social infrastructure		

³ The REDD desk. 2017. *Environment Act 2000 (Amendment 2010)*. Papua New Guinea.

Maximum allowed foreign ownership of equity in greenfield projects					
Water distribution	n/s		n/s	Healthcare infrastructure	n/s
Wastewater treatment	n/s		n/s	Healthcare services	n/s
Wastewater collection	n/s		n/s	Education infrastructure	n/s
Information and communication technology				Education services	n/s
					n/s
Fixed line infrastructure	n/s		n/s	Government buildings	n/s
Fixed line services	n/s		n/s	Prisons and correction centers	n/s
Wireless/mobile infrastructure	n/s		n/s	Social housing	n/s
Wireless/mobile services	n/s		n/s	Sport and leisure facilities	n/s

Note: n/s indicates that no particular restrictions are specified in the regulations.

The indicators marked in yellow above reflect the fact that, while there are no specific regulations confirming the level of foreign ownership permissible, the regulations do not specify any restrictions on foreign ownership in PPP arrangements.

Foreign investment in PNG is regulated by the Investment Promotion Act 1992. All foreign investors carrying on business in PNG must be registered with the Investment Promotion Authority. Foreign companies can be registered as either a branch of an overseas company or a PNG incorporated company. Under the Investment Promotion Act, foreign enterprises are prohibited from carrying on business in PNG unless they have been certified by the Investment Promotion Authority. A “foreign enterprise” is an enterprise which is more than 50% owned or controlled by noncitizens.

Is there any restriction for foreign investors on?	2016	2017
Land use/ownership rights as opposed to similar rights of local investors	yes	yes
Currency conversion	no	no

Foreign companies and individuals are not permitted to acquire customary land or freehold land in PNG. Any dealing involving land being granted or transferred to a foreign person or a corporate entity requires ministerial approval.

Foreign exchange controls have been largely deregulated in PNG. Foreign exchange transactions no longer require prior approval provided they are reported to the Bank of Papua New Guinea (BPNG). Controls remain in place in relation to foreign currency bank accounts held by residents. BPNG also maintains the ability to impose reporting and other administrative obligations, supervise tax clearance processes, regulate foreign currency accounts, and generally give directions in relation to foreign exchange. BPNG is also able to give specific directions about exchange control matters, or could reinstate exchange controls partially or wholly.

An employer must obtain an entry permit (visa) under the Migration Act (Chapter 16) and a work permit under the Employment of Non-Citizens Act 2007 for any noncitizens employed in PNG. These visas and work permits are particular to the employee, role, and employer. Employers must also maintain a register of all work permits.

The PPP Act does not specify any restrictions on foreign ownership in PPP arrangements, although this could conceivably be addressed in the Regulations, or in the PPP Centre Rules or by the PPP Tenders Board, in the future.

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	3	4	1
PPP projects with foreign sponsor participation (as a share to the total number of PPP projects)	100%	100%	100%

7.1.1.10 Dispute Resolution and Enforcement Mechanism

	2016	2017
Can a foreign law be chosen to govern PPP contracts?	✓	✓
What dispute resolution mechanisms are available for PPP agreements?		
Court litigation	no data	no data
Local arbitration	no data	no data
International arbitration	no data	no data
Has the country signed New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?	×	×

A foreign choice of law will generally be upheld and recognized as valid in PNG. The National Court of Papua New Guinea is a court of unlimited jurisdiction and frequently determines commercial disputes. Domestic arbitration can be conducted under the Arbitration Act 1951, although it is not frequently used for commercial disputes. The Arbitration Act makes no distinction between domestic and international arbitration. It does not outline the arbitration process, and it also does not refer to disputes between states or investor and state. PNG is not a

party to the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards. A PNG court order would be needed to enforce any foreign arbitral award in PNG. Investor-state dispute settlement mechanisms may also be available if a free trade agreement or investment treaty which contains an investor-state dispute settlement mechanism exists among the relevant jurisdictions.

The PPP Act does not specify any particular dispute resolution processes for PPP arrangements, although this could conceivably be addressed in the Regulations, or in the PPP Centre Rules or by the PPP Tenders Board, in the future.

7.1.1.11 Lender's Security Rights

	2016	2017
Does the law specifically enable lenders the following rights?		
Security over the project assets	no data	no data
Security over the land on which they are built (land use right)	no data	no data
Security over the shares of a PPP project company	no data	no data
Can there be a direct agreement between the government and lenders? ^a	x	x
Do lenders get priority in the case of insolvency?	no data	no data
Can lenders be given step-in rights? ^b	x	x

Notes:

^a There is no explicit regulation, but there are provisions to give comfort to lenders under the Foreign Private Investment Act, 1980.

^b There is no explicit regulation, but there are provisions to give comfort to lenders under the Foreign Private Investment Act, 1980.

The PPP Act does not specify lender's security rights (other than to permit a Relevant Public Body to enter into a direct agreement with a person who has arranged or provided funding for the partner to carry out the PPP arrangement), although this could conceivably be addressed in the Regulations, or in the PPP Centre Rules or by the PPP Tenders Board, in the future.

7.1.1.12 Termination and Compensation

	2016	2017
Does the law specifically enable compensation payment to the private partner in case of early termination due to:		
Public sector default or termination for reasons of public interest	x	x
Private sector default	x	x
Force majeure	x	x

	2016	2017
Does the law enable the concept of economic/financial equilibrium?	x	x
Does the law enable compensation payment to the private partner due to:		
Material adverse government action	x	x
Force majeure	x	x
Change in law	x	x

The PPP Act does not specify termination or compensation rights, although this could conceivably be addressed in the Regulations, or in the PPP Centre Rules or by the PPP Tenders Board, in the future.

7.1.1.13 Government Support

	2016	2017
Is project development fund available?	x	x
Land acquisition support from the government:		
Resettlement and/or compensation cost to residents at the project site	no data	no data
Imposed limits on timeframe to complete land acquisition (day)	no data	no data
Is there dedicated agency to streamline land acquisition?	no data	no data
Exemption from/reduction of land use fees	no data	no data
Viability gap fund (VGF)	x	x
Limits to VGF as a percentage of projects capital cost	n/a	n/a
Government guarantees:^a		
Currency inconvertibility and transfer risk	x	x
Foreign exchange risk	x	x
War and civil disturbance risk	x	x
Breach of contract risk	x	x
Regulatory risk	x	x
Expropriation risk	x	x
Government payment obligation guarantee ^b	x	x
Credit guarantees	x	x

	2016	2017
Minimum demand/revenue guarantee	x	x
Availability-/performance-based payment contracts ^c	x	x
Tax subsidies	no data	no data

Notes:

^a Indicators marked red if the regulation does not contain any provision for a particular type of guarantee.

^b Regulations are silent on this, but some energy independent power producer (IPP) projects received payment guarantees, therefore it is understood that this type of guarantee can be provided on a case-by-case basis.

^c Regulations are silent on this; however, all energy generation projects have been implemented on availability payment basis under PPA.

Those indicators marked in red in the above table reflect the fact that there is no specific law enabling such guarantees or availability payments to be provided, although it may be possible that some guarantees could be provided within an individual contract.

The PPP Policy, 2008 stipulates that the Treasury would manage any fiscal commitment from the government.

The PPP Act does not specify government support arrangements—other than that the state does not and will not provide a guarantee or indemnity unless it has been approved by the National Executive Council—although this could conceivably be addressed in the regulations, or in the PPP Centre Rules or by the PPP Tenders Board, in the future.

The PPP Act also provides that a Relevant Public Body may enter into a direct agreement with a person who has arranged or provided funding for the partner to carry out the PPP arrangement.

7.1.1.14 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Power purchase agreement	x	x
Capacity take-or-pay contract	x	x
Fuel supply agreement	x	x
Transmission and use of system agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

7.1.2 Institutional Capacity for Implementation

7.1.2.1 Institutional Setup

	2016	2017
Is there a specialized government agency (or agencies) established for PPP purposes (e.g., PPP unit)?	x	x
What role does this PPP unit have?		
Guidance to and coordination between other government agencies	n/a	n/a
Supporting (e.g., PPP project preparation, appointment of advisers, running project development fund)	n/a	n/a
Appraisal of PPP project feasibility studies	n/a	n/a
Approval of PPP projects	n/a	n/a
Procurement	n/a	n/a
Managing, monitoring, and enforcing ongoing PPP contracts	n/a	n/a

Currently, there is no operational centralized government PPP authority. A PPP Centre and PPP Steering Group are established under the PPP Act, but are not yet operational. PPP matters are currently being partially managed by the PPP Policy and Strategy Unit of Treasury (Table 7.1).

Table 7.1: PPP-Promoting Institutions in Papua New Guinea

Institution	Role in Promoting PPP
PPP Centre	<p>Part III of the PPP Act establishes the PPP Centre. It is an unincorporated statutory body with a range of powers and functions to assist the state and other Relevant Public Bodies on all aspects of PPP arrangements. Its functions include</p> <ul style="list-style-type: none"> • encouraging Relevant Public Bodies to consider PPP arrangements in procuring infrastructure; • advising and assisting Relevant Public Bodies on all aspects of PPP arrangements; • acting as secretariat to the PPP Steering Group and PPP Forum; • reviewing and evaluating proposals for projects and advising the PPP Steering Group; • coordinating the implementation of PPP policy, program, and projects by the national government, provincial government, and local-level governments; and • performing any other function concerning PPP arrangements.

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Table 7.1 *continued*

Institution	Role in Promoting PPP
	<p>The PPP Centre has broad powers that can be exercised on behalf of the state in connection with the performance of its functions, including accessing premises (subject to providing notice), giving directions (subject to approval of the responsible minister), engaging consultants and advisers, charging fees, and managing and administering funds.</p> <p>The operation of the PPP Centre must be in accordance with a code of practice prepared by the chief executive officer and approved by the responsible minister.</p> <p>With prior consultation with the responsible minister, the PPP Steering Group, appropriate Relevant Public Bodies, and other appropriate persons recommended by the PPP Forum, the PPP Centre may issue or revoke procedures, guidelines, and instructions as it considers necessary (PPP Centre Rules). Any issue or revocation of PPP Centre Rules must be published in the National Gazette.</p> <p>The PPP Centre is subject to control and supervision of the responsible minister who is accountable to the National Parliament for the PPP Centre. The PPP Centre must report to the PPP Steering Group on policy, program, and projects, and carry out the decisions of the PPP Steering Group and National Executive Council (NEC) on these matters.</p>
PPP Steering Group	<p>Part V of the PPP Act establishes the PPP Steering Group for the procurement and development of infrastructure by way of PPPs. Its functions include</p> <ul style="list-style-type: none"> • coordinating and monitoring the PPP policy and program of the NEC, • ensuring that the PPP policy and program are implemented appropriately, • recommending to and advising the NEC on measures that may be taken to advance PPP policy and program generally, • making recommendations to the NEC on an individual PPP project or group of projects, • ensuring public communications and interaction with the private sector on PPP is successful in building understanding and confidence among the general public, and • ensuring highest standards of probity are maintained in the procurement of PPP arrangements.
PPP Forum	<p>Part VI of the PPP Act provides that the chief executive officer must convene and hold a forum called the PPP Forum to discuss specific issues, such as PPP legislation, policy, and procedures for any proposals for change, but not any specific PPP arrangement.</p> <p>The purpose of the PPP Forum is to allow all stakeholders of society who have an interest in PPP arrangements and implementation of PPP projects to discuss and exchange views on specific issues. The chief executive officer must invite</p> <ul style="list-style-type: none"> • the significant private sector interest groups in Papua New Guinea that represent consumers and users of infrastructure facilities and services, and • members of the PPP Steering Group and senior representatives of state authorities involved in infrastructure development and PPP policy. <p>The chief executive officer must convene the PPP Forum at least once per calendar year.</p>

PPP = public-private partnership.

Source: PPP Act.

7.1.2.2 Project Planning

	2016	2017
Is there a PPP project pipeline developed and available?	x	x
Is preliminary selection of PPP projects consistent with public investment prioritization?	x	x
Is there screening/identification methodology to identify a list of potential PPP projects from public investment priority projects?	x	x

There does not appear to be any formally developed project pipeline database, and information regarding screening processes and investment priorities are not readily available. It is understood that, in the absence of any currently operational centralized PPP authority, a number of SOEs are individually creating potential pipelines of PPP projects.

7.1.2.3 Project Preparation

	2016	2017
Number of project appraisal stages	no data	no data
What feasibility analyses are required for the project to be approved as a PPP?		
Technical feasibility	x	x
Financial feasibility	x	x
Legal feasibility	x	x
Environmental and social sustainability	✓	✓
Value for money assessment	✓	✓
Fiscal affordability assessment	x	x
PPP structuring and risk allocation	✓	✓
Initial market testing	✓	✓
Number of approvals to be obtained by public sector to get final go-ahead to commence PPP project procurement	no data	no data
Is the approval from the Ministry of Finance or equivalent required before commencement of procurement?	x	x
Is it a normal practice to appoint independent, international, and qualified advisors to assist the government with project preparation?	no data	no data

Those indicators shown in yellow in the table above reflects the fact that, while the PPP Policy contemplates that such studies would be required as part of an outline business case, this is not yet a legal requirement.

7.1.2.4 Risk Allocation

	2016	2017
Preferred risk allocation matrix as reference	x	x

Currently, there is no reference risk allocation matrix, according to the PPP Policy, 2008. Once the PPP Act is enforced, a preliminary identification and notional allocation of risks is expected to be prepared by the PPP Centre for the purposes of the project development prior to procurement. These risks will have to be agreed with the Treasury. The documents provided by the project bidders during the procurement phase will also need to address the proposed risk allocation, which will be used as a criterion for the evaluation of the bidder's proposal.

7.1.2.5 Procurement

	2016	2017
Is competitive bidding the only method for PPP partner selection?	✓	✓
In case of competitive tender:		
Prequalification required?	✓	✓
Minimum time allowed to submit prequalification/expressions of interest (day)	no data	no data
Minimum time allowed to submit a bid:		
Domestic bidding (day)	no data	no data
International bidding (day)	no data	no data
Is negotiation available?	no data	no data
Is there a process allowing unsuccessful bidders to challenge the award/make a complaint?	x	x
If yes, maximum time allowed to submit a complaint starting from announcement of a preferred bidder	n/a	n/a
Maximum time limit from bid closing date until selection of a preferred bidder	no data	no data
Maximum time limit from selection of a preferred bidder until signing the contract	no data	no data
Transparency. Which of the following is published?		

	2016	2017
Procurement notice	no data	no data
Q&A during bid clarification stage	x	x
Evaluation results to bidders	x	x
Award notice	x	x
Contract	x	x
Confidentiality	x	x

Indicators marked in yellow in the table above reflect the fact that these are contemplated in the PPP Policy, but that such processes were not legally enforceable in 2016 and in 2017.

The features of the procurement process are presented in Table 7.2, as envisioned by the PPP Act. It should be noted that the procedure is only described in high-level terms, with little detail offered over timelines or regarding actual procedures, and no PPP projects have been implemented using this procedure yet. Also, the process assumes that the PPP Centre will have the role in steering the procurement process and provide advice and expertise to the NEC in selecting the most economically favorable option, prior to concluding the PPP with the existing private counterpart. However, the PPP Act only recently commenced and the PPP Centre is not yet in operation.

**Table 7.2: PPP Procurement Process Envisioned in Papua New Guinea
(as Envisioned by the PPP Act)**

Procurement Steps	Description
Project announcement	The preparation stage will be concluded with the approval of the National Executive Council (NEC) at which point the public-private partnership (PPP) Centre will sound out market appetite through a round of expression of interest. Prior to producing a shortlist and asking the selected entities to provide the bidding documentation, the PPP Centre will prepare the outline business case on behalf of the State of Papua New Guinea.
Prequalification invitation documentation	Expressions of interest solicited by the government will serve to confirm the level of market interest in the potential PPP project, and at this stage, the private proponent is not required to prepare detailed submissions.
Prequalification evaluation criteria	In soliciting expressions of interest, the government will develop an expression of interest document that provides clear guidance to potential private proponents on the information required for submission and how the government will evaluate this information.
Prequalification evaluation method	The evaluation of prequalification documents submitted by the bidders is to be carried out by the project committee, which can be assisted by advisors appointed by the PPP Centre. It is the responsibility of the PPP Centre to ensure that a technically skilled team is involved during the evaluation stage. In creating a shortlist of investors, the project committee, will ensure that it selects an optimal number of potential bidders.

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Table 7.2 *continued*

Procurement Steps	Description
	The PPP Centre can recommend that the project does not proceed to bidding stage if the results of the prequalification stage indicate a low level of interest.
Shortlist	The outline business case should already be fully developed, with NEC approval granted for the complete outline business case. This will form the basis for the PPP Centre preparing the bidding documents together with the relevant line agency (all national, provincial, and district government departments and entities that are charged with the mandate to deliver government services that can benefit from partnership with the private sector).
Request for proposal (RFP) documentation	All bidding documents should contain an information memorandum, or its equivalent in the RFP, as well as full drafts of all of the project agreements. Aside from the evaluation criteria to be used in determining the first-ranked bidder, the documents should allow the private proponent to understand the project background, output specifications, proposed risk allocation, any constraints, or a requirement arising from the legal or regulatory environment, as well as the expected support that government is willing to assume.
Methods of interactions with the bidders	Information not available
Evaluation of proposals	The criteria for evaluation of submitted bids will broadly cover the following: “whole-of-life” costs, including value for money and risk allocation; conformance to output specification; and departure from revised draft project agreements, if permitted by the RFP documents.
Investor selection	Following approval of the Supervisory Committee, a full business case will be prepared, and a submission for final approval will be made to the NEC. Consideration by the NEC shall be based on analysis of how value for money is expected to be achieved by proceeding with the delivery of the PPP project by the preferred proponent. At this stage, the estimated net cost of the PPP can be confirmed with the submitted bid.
Contract negotiation	The draft project agreement is intended to be broadly non-negotiable, and this forms the basis for the private proponent to submit a binding bid committing them to enter a contract to implement and operate the project.
Concession terms	The concession or partnership agreement will then be signed on a tripartite basis involving the line agency, the Minister for Treasury, and the successful private sector proponent.
Contract signing	Subject to consistency with the government’s existing policies on investment projects, approval by NEC will form the basis for the fiscal authority to commit to the project. The PPP Centre can, through the Project Committee, finalize project agreements with the awarded proponent.

PPP = public-private partnership.

Source: Government of Papua New Guinea. PPP Act 2014. <http://treasury.gov.pg/html/misc/Special%20Projects/PPP/PNG%20PPP%20Act%202014.pdf>.

7.1.3 PPP Market Maturity

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close	3	4	1
PPP projects currently in preparation	n/a	n/a	2
PPP projects currently in procurement	n/a	n/a	1

To date, four PPPs have been developed in PNG: two reached financial close in the 1990s, and the last one in 2017. The first was a diesel-fired power plant in 1996, the second was the rehabilitation of a water treatment plant in 1997, the third is the Edevu hydropower plant that is currently under construction, and the fourth is a concession for the container terminals at Lae and Port Moresby ports, which was awarded in 2017.

Two PPP projects are in preparation, including Jacksons International Airport and Naoro Brown hydroelectric power plant. As of February 2018, Ramu 2 hydroelectric power plant PPP was under procurement.

7.1.4 Financial Facilities

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	no data	no data	no data
PPP projects that received export credit agency/international financing institution support	no data	no data	no data

	2016	2017
Availability of nonrecourse/limited recourse hard currency loan	×	×
Maximum tenor (year)	n/a	n/a
Up-front arrangement fee	n/a	n/a
Floor rate (reference rate)	n/a	n/a
Margin rate	n/a	n/a
Political risk cover premium	n/a	n/a

	2016	2017
Availability of nonrecourse/limited recourse local currency loan	✓	✓
Maximum tenor (year)	5–10 years	10 years
Up-front arrangement fee	100–150 bps	100–150 bps
Floor rate (reference rate)	KFR	KFR
Margin rate	400–500 bps	400–600 bps
Availability of interest rate swaps	n/a	n/a
Forward duration of interest rate swap (year)	n/a	n/a
Availability of currency swaps	✗	✗
Forward duration of currency rate swap (year)	n/a	n/a
Project financing through project bond issuance	✗	✗
Percentage of project bonds out of total debt for project financing	n/a	n/a
Availability of project financing from local public sector banks	✗	✗
Max tenor for loan from local public sector banks (year)	n/a	n/a
Percentage of foreign debt out of total debt for project financing	n/a	n/a
Typical D:E ratio	60:40	60:40
Timeline to financial close	n/a	n/a
Minimum DSCR covenant levels	1.2x–1.5x	1.2x–1.5x

bps = basis points, D = debt, DSCR = debt-service coverage ratio, E = equity, KFR = Kina Facility Rate published by the Bank of Papua New Guinea.

There is little information in the public domain regarding the financing of PPPs in PNG. There are limited sources of finance domestically. International development agencies contribute significantly to the funding of infrastructure projects.

In PNG, the largest infrastructure project financing (not a PPP) was for the first export gas development project. A loan agreement for \$14 billion was signed on 15 December 2009.⁴

Table 7.3 shows the sources of the loans in PNG.

⁴ BankTrack. Projects. https://www.banktrack.org/project/liquified_natural_gas_lng_project#_

Table 7.3: Sources of Loans in Papua New Guinea

Source	Name of financial institution	Loan amount (\$ billion)
Export credit agencies	1. Export–Import Bank of the United States	8.30
	2. Export–Import Bank of China	
	3. SACE	
	4. Export Finance and Insurance Corporation	
	5. Japan Bank for International Cooperation	
	6. Nippon Export and Investment Insurance	
Commercial Banks	7. Sumitomo Mitsui Banking Corporation	1.95
	8. Mizuho Corporate Bank Limited	
	9. Mitsubishi UFJ Financial Group	
Corporate Entity	ExxonMobil	3.75
Total		14.00

Source: Japan Bank for International Cooperation.

7.2 Ports

7.2.1 Regulatory Framework

7.2.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	n/s	n/s

Note: n/s indicates that no particular restrictions are specified in the regulations.

Although joint ventures with local partners are highly encouraged in PNG, many businesses are foreign owned and a 100% foreign-owned enterprise within the port sector is allowed. The Department of Transport has its own procedures for approving foreign investment in the port sector.

7.2.1.2 Government Contracting Agency

Where the relevant public body is the state, the appropriate minister, acting following the approval of the NEC, has the power to execute an agreement for a PPP arrangement on behalf of the state.

7.2.1.3 Sector-Specific Regulations

Findings of the World Trade Organization Trade Policy Review of 2010 noted that coastal shipping has been restricted to domestic-flagged/licensed ships since the early 1960s to protect local shipping, i.e., cabotage is not permitted as foreign vessels may unload cargo only to certain ports.

7.2.1.4 Sector Regulators

Maritime shipping in PNG is regulated by the Department of Transport, in conjunction with the National Maritime Safety Authority under the National Maritime Safety Authority Act of 2003. The National Maritime Safety Authority is responsible for maritime safety, registration of domestic vessels, and marine pollution control.

Following a delegation from the Department of Transport, the state-owned PNG Ports Corporation Limited (PNGPCL) regulates, manages, and controls 16 declared ports in PNG under the Harbors Act. The declared ports are regulated under the Independent Consumer and Competition Commission (ICCC) Act of 2002, where ICCC has a regulatory contract with PNGPCL which relates to tariffs for essential port and stevedoring services. Charges are reviewed and approved annually.

Private ports, operated by companies for specific industries (e.g., mining), are regulated by the Department of Transport.

Details of port sector regulatory agencies in PNG are shown in Table 7.4.

Table 7.4: Port Sector Regulatory Agencies in Papua New Guinea

Agency	Function
National Maritime Safety Authority	<p>Issue and enforce pollution control standards following international agreements.</p> <p>Ensure that the vessels meet the safety standards required by Papua New Guinea's (PNG) legislation, regulations, and commitments under International Maritime Organization's conventions.</p>
PNG Ports Corporation Limited	<p>Control and regulate all waters and the use of all waters within a declared port.</p> <p>Act as a pilotage authority for the purposes of Part VIII of the Merchant Shipping Act (Chapter 242) where appointed as such under that act.</p> <p>Erect and place in position buoys, markers, beacons, and leads, and other things that are necessary or desirable to facilitate navigation in or into a declared port.</p> <p>Dredge and maintain channels and berthing places.</p> <p>Build retaining walls for the purpose of reclaiming, and claim and obtain title to land that is the bed of the declared port.</p>

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Table 7.4 continued

Agency	Function
Kumul Consolidated Holdings (KCH)	KCH is a holding company with ownership in state-owned enterprises, including PNG Power Limited, and it maintains management oversight of the companies. It may also take operational actions in companies that require support. KCH participates in monthly review meetings in the energy sector and supports PNG Power Limited.
Independent Consumer and Competition Commissions	Any functions that a regulatory contract—issued under the Independent Consumer and Competition Commission Act, 2002, which relates to the essential port services industry—contemplates will be performed by the commission for the purposes of that regulatory contract. The licensing functions conferred by the Harbor Act: Provide economic monitoring, control, inspection, and regulation of the essential port services industry. Consulting, where appropriate, commercial, industrial, and consumer organizations about any matter relating to the supply of essential port services.

Sources: National Maritime Safety Authority. *Functions and Responsibilities*; Independent Consumer & Competition Commission. 2013. *Separation of PNG Ports Corporation's Regulated and Unregulated Businesses*. http://www.pngports.com.pg/docs/Public-notice/Issues-Paper_Separation-of-Regulated-and-Unregulated-Businesses.pdf; National Maritime Safety Authority Act. 2003. *Functions and Responsibilities*.

7.2.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Engineering procurement and construction contract	x	x

7.2.2 Institutional Capacity for Implementation

7.2.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	x	x

The Department of Transport is responsible for preparing the sector strategy for transport policy and infrastructure investment over the medium to long term. The National Transport Strategy (2010–2030) sets priorities for transport expenditure and development. The Medium-Term Transport Plan provides a short- to medium-term action plan (2014–2019) to ensure that upcoming investment projects are consistent with the national transport investment strategy.

Although the National Transport Strategy encourages PPPs for the development of major new port facilities, the infrastructure investment within the port sector for the Medium-Term Transport Plan (2014–2018) is heavily influenced by the Lae Port Development. Large capital commitment from PNGPCL will limit the extent to which other port projects can be funded and/or developed. Maintenance of existing port infrastructure is priority for funding followed by upgrading and new development (where funds are available).

Lae Port Redevelopment Phase 2 involves a 25-year PPP contract that was awarded in 2017 to a Philippines-based company. The private company is in charge of operating two terminals in Lae Port and Port Moresby.

7.2.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	1	-

7.2.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	-	-	-
Competitive bidding process	-	-	1
PPP projects currently in procurement	n/a	n/a	-

7.2.3 Features of Past PPP Projects

As of the end of 2017, one PPP project reached financial close in PNG.

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	-	1	1
PPP projects that reached financial close (\$ million)	-	no data	no data

7.2.3.1 Tariffs

	2016	2017
Does private sector have the freedom to set the tariff?	✓	✓

Terminal handling charges (THCs) are charges made by the terminal operators in respect of container movements and services performed at a terminal. For container terminals, THCs cover the movement of a container between the ship's hold and the exit-entry gate via the container terminal yard. The ICCC has approved the 2018 maximum tariffs for the regulated services representing two groups of declared ports.

For the ports of Moresby, Lae, Kimbe, Vnimo, and Samarai, the maximum THCs for “Overseas Cargo—Inward” are \$222 per twenty-foot equivalent unit (TEU) and \$445 per forty-foot equivalent unit (FEU). For the ports of Madang, Rabaul, Alotoa, Oro BAY, Kavieng, Daru, Buka, Aitape, Lorengua, and Wewak, the maximum THCs are \$319 per TEU and \$638 per FEU.

It should be noted that the THCs are the maximum allowed charges and that PNGPCL may choose to apply a lower tariff if it is deemed appropriate by management and is consistent with the development goals of the port.

7.2.4 Local Capabilities

No available information.

7.2.5 Project Financing

No available information.

7.2.6 Challenges

Challenges of PPP progress in the port sector are provided in Table 7.5.

Table 7.5: Challenges of PPP Progress in the Port Sector in Papua New Guinea

Challenges	Currently Implemented Tackling Measures
Monopoly of Papua New Guinea Ports Corporation Limited	
Absence of sound PPP pipeline	
Cabotage policy	Gradual lifting of cabotage law

PPP = public-private partnership.

Source: Mott MacDonald.

7.3 Energy

7.3.1 Regulatory Framework

7.3.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Power generation	n/s	n/s
Power transmission	n/s	n/s
Power distribution	n/s	n/s
Oil and gas	n/s	n/s

Note: n/s = indicates that no particular restrictions are specified in the regulations.

7.3.1.2 Government Contracting Agency

The national state-owned corporatized power utility, PNG Power Limited (PPL) is the power authority that is responsible for the generation, transmission, distribution, and retailing of electricity throughout PNG. It has acted as a government contracting agency.

PPL services customers in almost all urban centers throughout the country encompassing the industrial, commercial, government, and domestic sectors. Where possible, the services extend to rural communities adjacent to these urban centers.

PPL is also presently undertaking a regulatory role on behalf of the ICCC. These responsibilities include approving licenses for electrical contractors, providing certification for models of electrical equipment and appliances to be sold in PNG, and providing safety advisory services and checks for major installations.

PNG has about 580 megawatts (MW) of installed generation capacity, including hydropower (230 MW or 39.7%), diesel (217 MW or 37.4%), gas-fired (82 MW or 14.1%), and geothermal (53 MW or 9.1%). Private sector mines have installed 280 MW of the 580 MW installed capacity for their operations.

PNG has significant underutilized indigenous energy sources such as hydropower, natural gas, geothermal, and solar.

7.3.1.3 Sector-Specific Regulations

PNG's governing laws on the industry include the Constitution of the Independent State of Papua New Guinea, Independent Consumer and Competition Commission Act (2002), Electricity Industry Act (2002), Oil and Gas Act (1996), and Mining Act (1992). There are other key supporting pieces of legislation though that provide a cumbersome and loose legal framework within which the energy sector operates.

The ICCC has published a Draft Third Party Access Code, which provides grid codes and open access rules for private entities to generate and supply electricity in PNG. When adopted, the code will enable open access on the PNG network and hopefully attract independent power producers to participate in the power market and improve supply reliability. But open access may be limited to areas not served by the grid, which may not be attractive to the private sector. Wheeling of power is not allowed at present, and PPL has exclusivity on consumers within a 10-kilometer radius of its grid. However, the private sector is free to develop projects and sell power directly to consumers with loads above 10 MW.

PNG has recently created a Ministry for Communication, Information Technology and Energy. In the power sector, the ministry will be in charge of preparing a bill that will aim to create a new energy authority and a technical regulator.

7.3.1.4 Sector Regulators

Details of energy sector regulatory agencies in PNG are shown in Table 7.6.

Table 7.6: Energy Sector Regulatory Agencies in Papua New Guinea

Agency	Function
Department of Petroleum and Energy	Department of Petroleum and Energy is the overarching agency responsible for energy sector policy and planning. It also heads the Electricity Management Committee, and is expected to oversee the technical regulation of the electricity sector, a function presently performed by Papua New Guinea Power Limited (PPL).
Kumul Consolidated Holdings (KCH)	KCH is a holding company with ownership in state-owned enterprises, including PPL, and it maintains management oversight of the companies. It may also take operational actions in companies that require support. KCH participates in monthly review meetings in the energy sector and supports PPL.

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Table 7.6 continued

Agency	Function
Independent Consumer and Competition Commission (ICCC)	ICCC is the regulator for electricity tariffs, but has little capacity to carry out its mandate and cannot independently take decisions. ICCC employs a revenue cap regulation principle and sets license conditions for market participants, though PPL is the only regulated entity at present. The ICCC also issues licenses to independent power producers and mining companies that own generation and distribution facilities.
PPL	PPL is a state-owned, vertically integrated electricity utility that provides generation, transmission, distribution, and retail services in most grid-connected urban areas.

Source: Mott MacDonald.

7.3.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Power purchase agreement	x	x
Capacity take-or-pay contract	x	x
Fuel supply agreement	x	x
Transmission and use of system agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	✓	✓

7.3.2 Institutional Capacity for Implementation

7.3.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	no data	no data

Sector policies. The government has recognized the range of issues facing the energy sector and, in response, approved the Electricity Industry Policy (EIP) in 2011. The policy (i) encourages private sector participation in the energy sector by facilitating competition and developing a clearly defined access regime, (ii) transfers a range of regulation functions from PPL to the government, and (iii) increases rural electrification through government assistance. The EIP will support state financing of community service obligations through establishment of an electricity trust fund. The National Energy Policy, 2016–2020 was adopted to ensure affordable, reliable, and accessible provision of energy in a manner that is competitive, sustainable, and environmentally friendly.

Strategies and plans. The government has included the energy sector as a key sector in the Papua New Guinea Development Strategic Plan, 2010–2030. The proposed development of the energy sector in each province was detailed in the PNG Power 10-Year Power Development Plan, 2009–2018, which listed the status of current infrastructure and a plan of priority investments over a 10-year period; it was replaced by the 15-Year Power Development Plan of PPL (2014–2028). The National Energy Plan is approved along with the National Energy Policy. The National Energy Plan promotes the development of appropriate regulatory guidelines including standards to meet the needs of producers, suppliers, and users. It promotes the National Electrification Roll-Out Plan for grid extension and off-grid stand-alone power supply system. It promotes 100% electricity usage from renewable energy sources by 2050.

Private sector. The government and PPL recognize that the private sector will play an important role in providing investment and management capacity for energy sector expansion. The PPP Act will support development of private sector participation in the energy sector, along with the EIP.

Tariffs. The government has recognized the investment disincentive provided by the single national power tariff and proposes to address the issue by (i) allowing flexible tariff setting under the EIP, (ii) implementing the existing community service obligation policy to support government financing of power infrastructure that is not financially viable, and (iii) establishing an electricity trust fund under the draft EIP to finance such investments.

Institutional capacity is a constraint in PNG. The Department of Petroleum and Energy has inadequate trained staff to undertake all its intended functions and plans to substantially augment its staff. The ICCC is intended to be both the technical and economic regulator, but because it has inadequate technical capacity, the function of technical regulation currently resides with PPL, which itself is the regulated entity. The ICCC receives tariff applications from PPL annually, and tariffs are decided based on revenue requirements and price caps. The ICCC, however, has no benchmarks for implementing price cap regulation nor does it have expertise in assessing demand projects and investment plans prepared by PPL. The ICCC also does not review power purchase agreements between PPL and independent power producers. The ICCC is supposed to conduct hearings on tariff applications; however, due to lack of funds, it generally only posts information on its website and in newspapers. The license fee paid by entities reportedly covers only about 10% of the ICCC budget, with the government providing the rest. While the ICCC is an independent entity, the government exercises control over the retail tariffs charged by PPL.

PPP pipeline of energy projects is shown in Table 7.7.

Table 7.7: PPP Pipeline of Energy Projects in Papua New Guinea

No.	Project Name	Value (\$ million)
1	80 megawatts Naoro Brown hydroelectric plant	>100

PPP = public-private partnership.

Source: Developing Market Associates. Papua New Guinea's Deep Potential Starts to Emerge. <http://www.developingmarkets.com/perspectives/papua-new-guineas-deep-potential-starts-emerge>.

7.3.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	1

PNG's Strategic Development Plan, 2010–2030 forecasts that installed capacity in that period will need to nearly quadruple, from 500 MW to 1,970 MW. Hydropower is to make up the bulk of this, rising from 215 MW to 1,140 MW. The use of diesel during that period is expected to tail off, from 160 MW to just 30 MW, or 1.5% of total capacity, while the use of other renewables (mainly geothermal) will increase to 380 MW, or 19.2%.

Several hydropower projects are in discussion, Hela 200 MW hydroelectric power plant in the Highlands being one of them. Plans to build by far PNG's largest hydro project to date—a \$5 billion 2,500 MW plant on the Purari River—were put on hold, however, after developer Origin Energy announced in March 2014 it was shelving the plan. The plant's output would have been enough to power PNG several times over, and then sell the excess output to Queensland, Australia, via undersea cable.

7.3.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	no data	no data	no data
Unsolicited bids	no data	no data	no data
Competitive bidding process	no data	no data	no data
PPP projects currently in procurement	n/a	n/a	1

Ramu 2 hydroelectric power plant PPP (180 MW) is currently under procurement. Shenzhen Energy and Sinohydro Corporation were selected as the preferred bidder in March 2017.

7.3.3 Features of Past PPP Projects

7.3.3.1 PPP Projects That Reached Financial Close

	1990–2016		1990–2017		In 2017	
	Number	\$ million	Number	\$ million	Number	\$ million
PPP projects that reached financial close	1	262	1	262	-	-
<i>Renewable energy generation:</i>						
Solar	-	-	-	-	-	-
Solar/wind	-	-	-	-	-	-
Wind	-	-	-	-	-	-
Hydro	1	197	1	197	-	-
Geothermal	-	-	-	-	-	-
Waste/biomass	-	-	-	-	-	-
<i>Thermal energy generation:</i>						
Coal	-	-	-	-	-	-
Diesel	1	65	1	65	-	-
Natural gas	-	-	-	-	-	-

7.3.3.2 Foreign Investor Participation

	1990–2016		1990–2017		In 2017	
	Number	Share of the total number of projects	Number	Share of the total number of projects	Number	Share of the total number of projects
PPP projects with foreign sponsor participation (number)						
Renewables	1	100%	1	100%	-	-
Thermal	1	100%	1	100%	-	-

7.3.3.3 Government Support

No information available.

7.3.3.4 Tariffs

	2016	2017
Is there a system of feed-in tariffs (FIT)?	x	x

The uniform retail tariff is not cost reflective. While there is no explicit subsidy, the uniform tariff cross-subsidizes the cost of supply between the main grid-connected regions, which are powered by cheap hydropower, and the Highlands area, which is powered by expensive diesel generation. The uniform tariff serves as a disincentive for PPL to make investments for increasing electricity access in rural areas. Yet, it has been politically difficult to move away from uniform tariffs, though the EIP allows for flexible tariff setting.

Every year, PPL submits tariff calculations to the ICCC for approval before implementation.

PPL is regulated under a form of price control mechanism known as the maximum average price; thus, for each of the tariffs that PPL charges to their different classes of consumers (industrial, general supply, domestic customers, and public lighting), the average price of those tariffs must not exceed the maximum average price that the ICCC determines.

PPL, under the supervision of the ICCC, ensures that the services provided and tariffs set are in line with the regulatory requirements.

According to the National Energy Policy (2016–2020), the private sector will be encouraged through feed-in tariff (FIT) to develop potential sites to generate electricity for their own consumption and for export of any surplus to the national grid and neighboring countries. The government will provide letters of comfort to investors which guarantee purchase of electrical energy on just and reasonable terms.

The specific details of FIT for renewable energy resources will be captured in the Renewable Energy Policy to be produced by the institution mandated to draw up this sectoral policy.

7.3.3.5 Risk Allocation

Typical risk allocation arrangements in energy PPP contracts are shown in Table 7.8.

Table 7.8: Typical Risk Allocation Arrangements in Energy PPP Contracts in Papua New Guinea

Risk	Private	Public	Shared	Comment
Demand risk		✓		
Revenue collection risk		✓		
Tariff risk	✓			
Government payment risk		✓		
Environmental and social risk	✓			
Land acquisition risk			✓	
Permits	✓			
Handover risk	✓			
Political risk		✓		
Regulatory risk		✓		
Interconnection risk			✓	
Brownfield risk: asset condition				n/a
Grid performance risk	✓			
Hydrology risk	✓			
Exploration and drilling risk	✓			

PPP = public–private partnership.

Source: Mott MacDonald.

7.3.4 Local Capabilities

There are many local construction companies; however, their technical and commercial delivery capability for hydropower projects is considered limited.

The Government of PNG is keen for local businesses to participate in future foreign direct investment projects. PNG Prime Minister Peter O'Neill has urged foreign companies “to look at taking on board PNG investors and partners from the outset. We have successful contractors, transport operators, engineers and other professionals, retailers, farmers, manufacturers, and processors – all with funds or access to funds that can be used to participate directly in the next phase of the development of the resources sector.”

7.3.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	no data	no data	no data
PPP projects that received export credit agency/international financing institution support	no data	no data	no data

7.3.6 Challenges

Challenges of PPP progress in the energy sector are listed in Table 7.9.

Table 7.9: Challenges for PPP Progress in the Energy Sector in Papua New Guinea

Challenges	Currently Implemented Tackling Measures
Private sector investments are critical for the country, but attracting increased private investment will require enabling policies, such as the PPP policy that still needs to be implemented, and risk mitigation instruments to overcome the perception of country and utility risk. While there are draft policies on open access, the utility in Papua New Guinea (PNG) remains vertically integrated and PNG Power Limited (PPL) is a single buyer for supply to the three main grids serving the urban areas. This, too, poses a risk for private investments.	
Low electrification ratio, energy shortages, and supply disruptions, coupled with high cost, remain serious obstacles to economic activity and growth in PNG.	These are now being addressed through a number of measures to modernize the transmission and distribution networks.
The government has recognized the investment disincentive provided by the single national power tariff.	Government proposes to address the issue by (i) allowing flexible tariff setting under the Electricity Industry Policy, (ii) implementing the community service obligation policy to support government financing of power infrastructure that is not financially viable, and (iii) establishing an electricity trust fund under the draft Electricity Industry Policy to finance such investments.
Diversifying the economy and increasing employment.	

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Table 7.9 *continued*

Challenges	Currently Implemented Tackling Measures
Insufficient data and analytical tools to inform the level of tariffs for different technologies for feed-in tariffs.	The government wants to undertake a study on the capital expenditures and the operating costs on the different types of technologies, and develop sufficient analytical tools to inform the level of tariffs for different technologies.

PPP = public–private partnership.

Source: Mott MacDonald.

7.4 Other Sectors

Potential PPP projects for sectors not covered in preceding sections are presented below.

PPP pipeline of projects from other sectors is shown in Table 7.10.

Table 7.10: PPP Pipeline of Projects from Other Sectors in Papua New Guinea

No.	Project Name	Value (\$ million)
1	Port Moresby International (Jacksons) Airport PPP	To be decided

PPP = public–private partnership.

Source: Infradeals. Infradeals Database. <https://www.infra-deals.com> (subscription only).

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8. PEOPLE'S REPUBLIC OF CHINA

Public-private partnerships (PPPs), in a broad sense, have existed in practice in the People's Republic of China¹ (PRC) since the 1980s, featuring build-own-transfer (BOT), concessions, and other forms of cooperation between local governments and nongovernment investors, referred to as “social capital.” In 2014, to encourage the use of PPP in infrastructure, the Ministry of Finance (MOF) issued the Operational Guidance on the Modes of Cooperation by Governments and Social Capital (for trial implementation). This was the first national-level PPP guidance, and several guiding policies have been published since then.

However, there are no PPP-specific laws yet in place in the PRC, although there are administrative measures which are aimed at encouraging the private sector to participate in PPP projects that are not legally prohibited, nor legally required, but may be negotiated on an individual contract basis.

The institutional framework supporting PPPs is not yet fully integrated, and there are a range of government authorities who may be involved in preparing, approving, and procuring PPPs across sectors and provinces. The MOF and the National Development and Reform Commission (NDRC) are the main bodies responsible for PPP regulation and oversight; both issue PPP guidelines and lists of PPP projects.

In December 2014, the MOF formally established the China PPP Center, responsible for policy research, advice, and training, but with no formal role in the screening, preparation, or procurement of PPPs. The local departments of the NDRC, the development and reform commissions (DRCs), are responsible for PPP project approval and feasibility study ratification. In 2015, guidelines issued by the MOF clarified certain procedures in relation to value for money (VFM) assessment and fiscal affordability verification, and required all PPP projects to be listed on a data platform managed by the PPP center.

The complex land issues associated with the infrastructure of the PRC, particularly the restrictions on the government's ability to help social capital—private businesses and state-owned enterprises (SOEs)—cover the cost of land, is often a key factor affecting the feasibility and financial viability of PPP projects. There are also complications arising from the fact that land usage by the private sector (including SOEs) generally requires an open bidding process, which is undertaken separately from the PPP bidding process, although some provinces are working on ways to coordinate the two. In addition, the inability of government organizations to provide guarantees under the law of the PRC, and restrictions on providing long-term payment commitments, also present challenges to the PPP market.

¹ The *PPP Monitor* is envisaged to be a dynamic product and comments for improving data quality are welcome and can be incorporated in future editions. It should also be noted that the report is using standardized definitions which may not match a particular developing member country's definitions. For the meaning of each indicator, please refer to the Appendix.

In terms of PPP pipelines, batches of demonstration projects have been announced by the MOF each year since 2014, with the third batch comprising 516 projects, including projects in the energy, transport, water, agriculture, and social infrastructure sectors. The projects listed represent a selection of those submitted by each province as demonstration projects. However, in addition, ministries and other government authorities have PPP pipelines in their own sectors or geographic jurisdictions, and the NDRC also promotes a large list of PPP projects, comprising those proposed by subordinate DRCs. In fact, the identification, preparation, and approval of PPP projects mostly reside with the local governments, and central government-driven PPP projects are generally sourced from local governments.

On 6 February 2018, the fourth batch of PPP demonstration projects was published by the MOF. The new pipeline of projects covers a total of 396 projects with an aggregate value of about \$120 billion. Compared with the third batch, the number of approved projects declined by 120 (despite an increase of 52 more projects submitted for approval) and the aggregate value of approved projects decreased by \$65 billion.

Figure 8.1: Availability of PPP Pipelines in the People's Republic of China by Sector

Transport	Energy	Water and wastewater
Municipal solid waste	ICT	Social infrastructure
	The pipeline is developed with more than five projects	
	Less than five projects	
	No definitive plans for PPP projects	

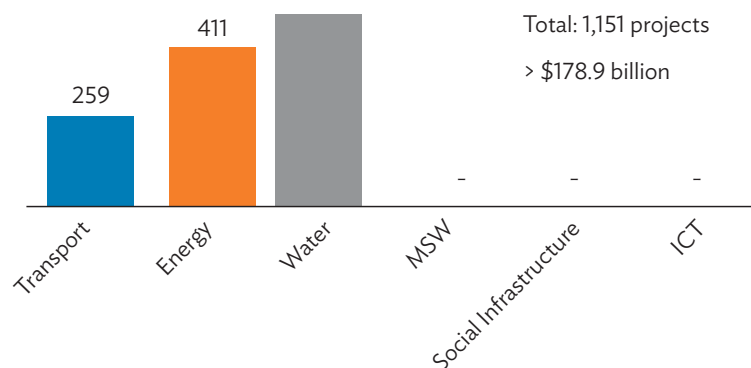
ICT = information and communication technology, PPP = public-private partnership.

Note: The projects included are published on the official sources.

Source: Mott MacDonald.

Among all selected projects, five sectors account for more than 20 of the selected projects. Of the 396 selected demonstration projects, 163 are in the municipal works sector (accounting for 41%), 41 are in the transport sector (accounting for 10%), and 37 are in the ecological construction and environmental protection sector (accounting for 9%). From 1990 to date, a total of 1,151 projects, valued at \$178.9 billion, have reached financial close. A majority of these are in the water sector, which includes 481 projects valued at \$67.5 billion, while transport projects reached the highest value at \$98.1 billion with 259 projects (Figure 8.2). According to the statistics, the government appears to have shifted its focus to renewable energy projects, as no thermal projects have reached financial close since 2015 and there are none in the pipeline.

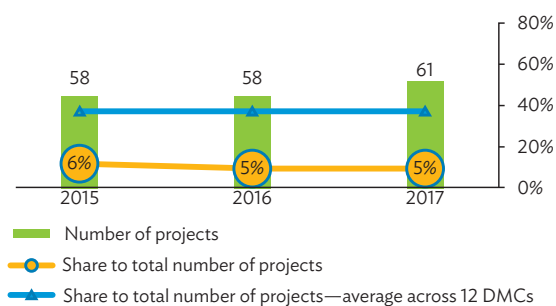
Figure 8.2: PPP Projects in the People's Republic of China that Have Reached Financial Close, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste

Sources: IJGlobal. *IJGlobal Project Finance and Infrastructure Journal*. <http://www.ijglobal.com>; World Bank Group. 2015. *World Bank Asia Pacific Private Participation in Infrastructure (PPI) Database*. <http://ppi.worldbank.org/> (accessed 22 January 2018).

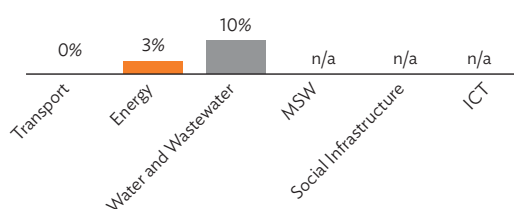
Figure 8.3: PPP Projects in the People's Republic of China on Availability/Performance Payment Basis by Sector, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

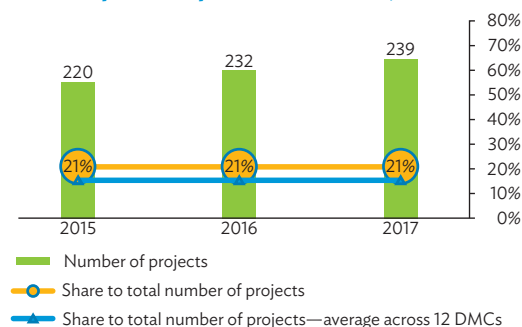
Source: Mott MacDonald.

Figure 8.4: Share of PPP Projects in the People's Republic of China on Availability/Performance Payment Basis by Sector, 1990–2017



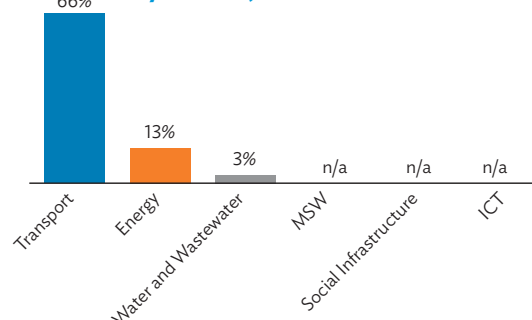
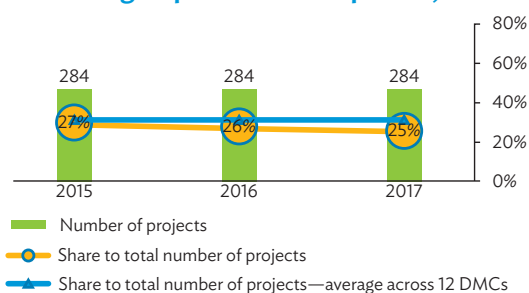
Availability payment contracts are applicable in all three sectors. However, this kind of contract is not a prominent payment mechanism even in the main sector where it is usually applied, comprising a mere 10% in the water and wastewater sector.

Most infrastructure projects are traditionally developed and managed by SOEs in the PRC, which is reflected in the relatively high share (21%) of institutional PPP projects between 1990 and 2017. The share of foreign investor participation in PPP projects in the PRC reached 35% in 2015; however, there have been no foreign investors involved since then. The share of foreign

Figure 8.5: Institutional PPP Projects in the People's Republic of China, 1990–2017

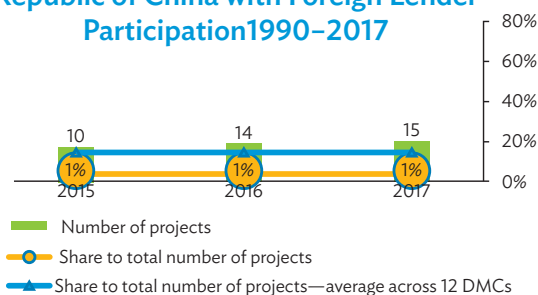
DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public–private partnership.

Source: Mott MacDonald.

Figure 8.6: Share of Institutional PPP Projects in the People's Republic of China by Sector, 1990–2017**Figure 8.7: PPP Projects in the People's Republic of China with Foreign Sponsor Participation, 1990–2017**

DMC = developing member country, PPP = public–private partnership.

Source: Mott MacDonald.

Figure 8.8: PPP Projects in the People's Republic of China with Foreign Lender Participation 1990–2017

DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public–private partnership.

Source: Mott MacDonald.

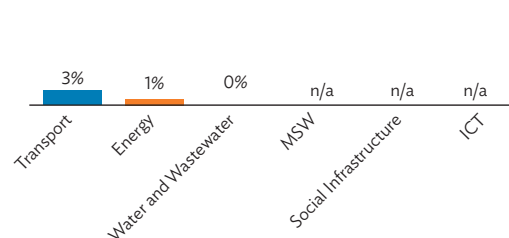
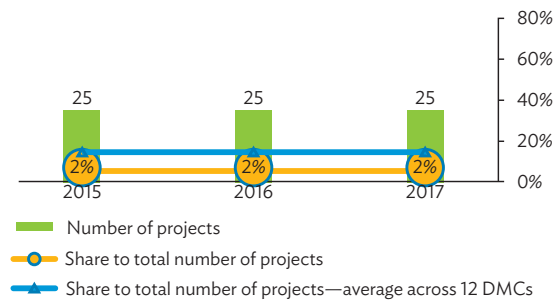
Figure 8.9: Share of PPP Projects in the People's Republic of China with Foreign Lender Participation by Sector, 1990–2017

Figure 8.10: PPP Projects in the People's Republic of China with Export Credit Agency/International Financing Institution Finance Support, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Figure 8.11: Share of PPP Projects in the People's Republic of China with Export Credit Agency/International Financing Institution Finance Support By Sector, 1990–2017

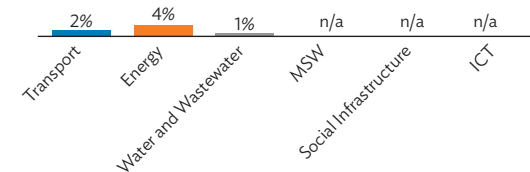
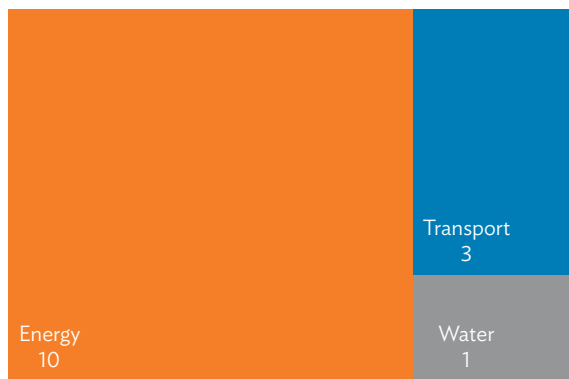


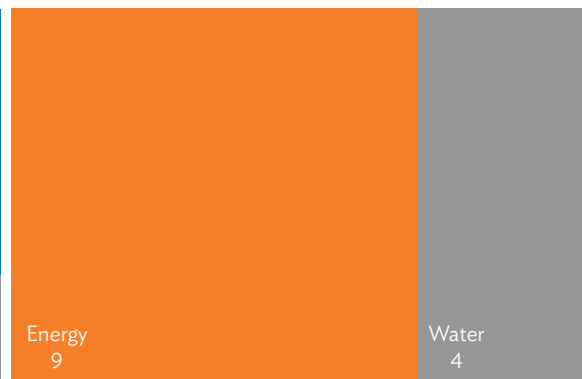
Figure 8.12: PPP Projects in the People's Republic of China Currently in Preparation, 2017



PPP = public-private partnership.

Source: Mott MacDonald.

Figure 8.13: PPP Projects in the People's Republic of China Currently in Procurement, 2017



lenders has been historically low as, ever since 1990, projects with foreign lending making up only 1% of the total projects.

Current restrictions on economic ownership by foreign investors in PPP projects are favorable for the transport and energy sectors, but regulations remain unclear for other sectors such as social infrastructure and information and communication technology (ICT).

The share of financing from export credit agency (ECA)/international financing institution (IFI) provided for PPP projects has also been insignificant since 1990, as it covers only 2% of all the projects to date (Figure 8.10).

During 2017, there were 14 PPP projects in various stages of preparation and 13 under procurement. Most of these projects are in the renewable energy sector.

Key Developments from 2016

There have been no particular changes of significance from 2016 in the PPP environment in the PRC.

8.1 Country Profile

8.1.1 Regulatory Framework

8.1.1.1 PPP Law

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	x	x

	1990– 2016	1990– 2017	In 2017
Number of PPP projects that reached financial close under the latest PPP law	n/a	n/a	n/a

PPPs in a broad sense have existed in practice in the PRC since the 1980s, featuring build–operate–transfer (BOT), concessions, and other forms of cooperation between local governments and nongovernment investors, referred to as social capital. Social capital includes SOEs, companies with significant government ownership, private companies, and other organizations, potentially including foreign investors. In 2014, to encourage the use of PPP in infrastructure, the MOF issued Operational Guidance on the Modes of Cooperation by Governments and Social Capital (MOF PPP Guidelines), for trial implementation. This was the first systematic PPP mechanism at the national level. A number of guiding policies have been published since then, including the following:

- Notice to Encourage Private Capital to Invest in the First Batch of Infrastructure Projects, NRDC, 18 May 2014;
- Opinions of the State Council on Strengthening the Management of Local Government Debt, State Council, 21 September 2014;
- Notice on Questions Relating to Expanding the Use of PPPs, MOF, 23 September 2014;
- Guiding Opinions on the Innovative Investment Mechanism and Encouraging Social Investment in Key Sectors, State Council, 16 November 2014;

- Circular on Issuing the Operational Guidance on the Modes of Cooperation by Governments and Social Capital (for trial implementation), MOF, 29 November 2014;
- Circular on Issues concerning the Implementation of the Demonstration Projects of Public-Private Partnership, MOF, 30 November 2014;
- Guiding Opinions of the National Development and Reform Commission on Launching the Cooperation between Governments and Social Capitals, NDRC, 2 December 2014;
- Notice on Regulating Government and Social Capital Cooperation Contract Management and Guidelines on PPP Contracts (for trial implementation) (MOF PPP Contract Guidelines), MOF, 30 December 2014;
- Measures for Administration of Government Procurement in PPP Projects, MOF, 31 December 2014;
- Circular on Issuing the Interim Measures for the Administration of Government Procurement through the Competitive Consultation Procurement Method, MOF, 31 December 2014;
- Circular of the National Development and Reform Commission and the China Development Bank on Promoting the Support of Development Financing for Public Private Partnerships and Related Work, NDRC, MOF, 10 March 2015;
- Guidance on Financial Affordability Assessment of PPP Projects, MOF, 7 April 2015;
- Circular on Using Government Investment to Support Social Investment Projects, NDRC, MOF, 21 April 2015;
- Guidelines on Promoting PPP in Public Service, MOF, NDRC, People's Bank of China, 19 May 2015;
- Measures for the Administration of Concession for Infrastructure and Public Utilities, NDRC, MOF, Ministry of Housing and Urban-Rural Development, Ministry of Water Resources, People's Bank of China, 1 June 2015;
- Circular on Further Implementing the Demonstration Work relating to Public-Private Partnership Projects, MOF, 25 June 2015;
- Circular on Measures Implementing Administrative Measures for the Franchising of Infrastructure and Public Utilities, NDRC, 2 July 2015;
- Notice on Implementing the Policy of Replacing Subsidies with Reward, MOF, 8 December 2015;
- Circular on Issuing PPP Value for Money Assessment Guidelines (for trial implementation), MOF, 18 December 2015;
- Notice on Regulating the Operation of PPP Information Platform, MOF, 18 December 2015;
- Notice on Implementation of PPP in Traditional Infrastructure NDRC, 10 August 2016;
- Notice on Measures for Financial Administration of PPP Projects, MOF, 24 September 2016;
- Notice on Further Regulating Debt and Financing Behaviors of Local Government, MOF, NDRC, Department of Justice, People's Bank of China, China Banking Regulatory Commission, China Securities Regulatory Commission, 26 April 2017;
- Notice on Prohibition of Illegal Financing by Local Government in the Name of Service Procurement, MOF, 28 May 2017;
- Notice on Regulating the Administration of Project Libraries at Government and

Social Capital Cooperation (PPP) Integrated Information Platform (“PPP Information Platform”), MOF, 10 November 2017; and

- Guiding Opinions of Encouraging Civil Capital’s Participation into Government and Social Capital Cooperation (PPP) Projects, 28 November 2017.

PPP is being promoted and developed both in practice and through development of the regulatory framework. Although no law specifically governing PPP has been passed yet, dozens of guidelines and other documents at the ministry and local level now facilitate PPP implementation, and a PPP law is expected to be passed in the next few years. On 24 July 2017, the Regulations for Public–Private Partnerships in the Infrastructure and Public Services Sectors (draft, for comment) was issued by the Legislative Affairs Office of the State Council. Public comments were collected until 22 August 2017. It is now hoped to come into effect in 2018.

Following State Council approval, the concession measures, which came into force on 1 June 2015, expanded the existing concession regulation that only applied to urban utilities. These are the most comprehensive, and arguably the most authoritative, statement of PPP law in the PRC to date. The concession measures aim to guide and encourage commercial participation in the construction and operation of infrastructure and utility projects, including energy, transportation, water resources, environmental protection, and municipal works projects.

These various guidance documents and regulations provide that:

- The contracting party for a PPP project must be selected in accordance with the Government Procurement Law.
- Government’s payment obligation in a PPP project should be incorporated into the government budget at the same level and into the government consolidated financial report in accordance with the Budget Law.
- Both government and social capital parties to PPP contracts can seek adjustment to and protection of their rights and obligations according to the Contract Law.
- Land acquisition methods and procedures in PPP projects are stipulated by the Land Administration Law and related regulations.
- Laws and regulations on project planning, approval, feasibility study, environmental impact assessment, and design must be followed for preliminary planning and approval of a project.
- Relevant environmental, safety, and industry monitoring laws and regulations, such as the Environmental Protection Law and Safe Production Law, must also be followed by PPP projects.

8.1.1.2 PPP Types

	2016	2017
Number of PPP types defined in PPP regulations	7	7

The principal types of PPP mentioned in the MOF PPP guidelines are operation and maintenance, management contract, build-operate-transfer, build-operate-own, transfer-operate-transfer, and rehabilitate-operate-transfer. Other guidelines also mention build-own-operate-transfer.

According to the MOF PPP guidelines, the type of PPP should be determined based on pricing mechanism, level of project investment income, basic framework of risk allocation, financing requirements, expansion requirements, and disposition at the end of the project's life. In fact, neither the MOF PPP guidelines nor other government guidelines prohibit other types of PPP.

8.1.1.3 Eligible Sectors

	2016	2017		2016	2017
Transport			Energy		
Roads	✓	✓	Power generation	✓	✓
Railways	✓	✓	Power transmission	✓	✓
Ports	✓	✓	Power distribution	✓	✓
Airports	✓	✓	Oil and gas	✓	✓
Water and wastewater	✓	✓	Information and communication technology	✓	✓
Municipal solid waste	✓	✓	Social infrastructure^a	✓	✓

Note:

^a Guidelines mention municipal infrastructure rather than social infrastructure.

There are no specific legal regulations specifying the sectors eligible for PPP, but the MOF PPP guidelines explicitly stipulate that the MOF (PPP center) is responsible for collecting and identifying potential PPP projects from authorities supervising sectors such as transportation, housing, environment, energy, education, healthcare, sports, and cultural facilities. PPPs in other sectors are all eligible in practice, with the exception of airports. Since the airport sector is considered sensitive, PPPs may be possible only in some cases.

	2016	2017
Project funding structure	x	x
Project capital investment size	No value thresholds	No value thresholds

	2016	2017
Contract term	According to the concession measures, the term of concession shall not exceed 30 years, but exceptionally for projects with large investment and long return cycle, a longer concession term is permitted. Currently, there is no mandatory requirement for the minimum term of PPP. We note that according to the PPP law (draft for comments), the minimum term of PPP will be no less than 10 years.	Remains unchanged

8.1.1.4 Unsolicited Bids

	2016	2017
Acceptance of unsolicited proposals	x	x
Eligibility of the project proponent to have:		
Competitive advantage at bid evaluation	x	x
Swiss challenge	x	x
Compensation of the project development cost	x	x
Government support for land acquisition and resettlement cost	x	x
Government support in the form of viability gap fund and guarantees	x	x

8.1.1.5 Institutional PPPs

	2016	2017
Are institutional PPP arrangements allowed (e.g., joint venture between government or state-owned enterprises and private firms as a special purpose vehicle company)?	✓	✓

	1990–2016	1990–2017	In 2017
Institutional PPP projects (number)	232	239	7
Institutional PPP projects (as a share to the total number of PPP projects)	21%	21%	18%

A significant portion of infrastructure construction and utility companies are SOEs, and many of them have agreements similar to a PPP structure with local governments.

On 25 November 2017, the state-owned Assets Supervision and Administration Commission published the Notice on Strengthening the Risk Control on PPP Business of Central SOEs, for the purpose of regulating the central SOE participation in PPP projects. The notice imposes additional requirements and restrictions on SOE participation in PPP projects.

8.1.1.6 Land Rights

	2016	2017
Which of the following is permitted to the private partner:		
Transfer land lease/use/ownership rights to the third party	✓	✓
Use leased/owned land as collateral	✓	✓
Mortgage leased/owned land	✓	✓
Is there any legal mechanism for granting wayleave rights, for example, laying water pipes or fiber cables over land occupied by persons other than government or the PPP counterparty?	✓	✓
Is there any land registry/cadastre with public information on land plots?	✓	✓
Which of the following information on land plots is available to the private partner:		
Appraisal of land value	×	×
Land users	✓	✓
Land boundaries	✓	✓
Utility connections	✓	✓
Immovable property on land	✓	✓
Plots classification	✓	✓

Considering the state ownership and collective ownership of land in the PRC, PPP projects would acquire land through obtaining a state-owned land use right by either free allocation or compensated transfer. In practice, there are complex land issues associated with the PRC infrastructure law, particularly the restrictions on the government's ability to help the private sector cover the cost of land. This is often a key factor affecting the feasibility and financial viability of PPP projects.

8.1.1.7 Environmental and Social Issues

	2016	2017
Is there any local regulation establishing process for environmental impact assessment?	✓	✓
Is there any legal mechanism for the private partner to limit environmental liability for what is outside of its control or caused by third parties?	✓	✓
Is there any local regulation establishing process for social impact assessment?	×	×
Is there involuntary land clearance for PPP projects?	✓	✓

The PRC has a complex institutional framework for environmental protection and specifically for impact assessment. In 2002, the Government of the PRC approved a new environmental impact assessment law, The Law of the PRC on Environmental Impact Assessment, which was passed in October 2002.

The practice of social impact assessment is expanding in the PRC. However, while certain guidelines by various authorities mention social impact assessments, and there are some requirements under NDRC project application and verification measures for analysis of economic and social effects of a project, there are no known formal legal requirements in relation to social impact assessments comparable to what is found in some other jurisdictions.

8.1.1.8 Foreign Investor Participation Restrictions

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Transport			Energy^a		
Roads	49%	49%	Power generation	100%	100%
Railways	100%	100%	Power transmission	49%	49%
Ports	100%	100%	Power distribution	49%	49%
Airports	49%	49%	Oil and gas	99%	99%
Water and wastewater^b			Municipal solid waste	100%	100%
Bulk water supply and treatment	100%	100%	Social infrastructure		
Water distribution	100%	100%	Healthcare infrastructure	70%	70%

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Wastewater treatment	100%	100%	Healthcare services ^c	no data	no data
Wastewater collection	100%	100%	Education infrastructure	no data	no data
Information and communication technology			Education services ^d	49%	49%
Fixed line infrastructure	49%	49%	Government buildings	no data	no data
Fixed line services	49%	49%	Prisons and correction centers	no data	no data
Wireless/mobile infrastructure	49%	49%	Social housing	no data	no data
Wireless/mobile services	49%	49%	Sport and leisure facilities ^e	no data	no data

Notes:

^a Foreign investment is restricted for construction and operation of pipeline networks for gas and heat in cities with a population of more than 500,000 inhabitants.

^b Foreign investment is restricted for water supply and sewerage projects. In cities with a population of more than 500,000 inhabitants.

^c Can depend on regulations for certain regions.

^d Except for vocational training services, which can be 100% foreign-owned.

^e Certain types of facilities have specific restrictions such as 49% for movie theaters. 500,000 inhabitants.

Is there any restriction for foreign investors on?

	2016	2017
Land use/ownership rights as opposed to similar rights of local investors ^a	yes	yes
Currency conversion	yes	yes

Notes:

^a Can depend on the nature of the buyer/owner and the proposed use of the land.

	1990–2016	1990–2017	In 2017
PPP projects with foreign sponsor participation (number)	284	284	–
PPP projects with foreign sponsor participation (as a share to the total number of PPP projects)	26%	25%	0%

Except for sectors in which foreign investment is explicitly prohibited, foreign enterprises and Sino-foreign joint ventures can participate in PPP projects. Specific limits on foreign ownership may apply in certain sectors as indicated in the table above.

8.1.1.9 Dispute Resolution and Enforcement Mechanism

	2016	2017
Can foreign law be chosen to govern PPP contracts?^a	✓	✓
What dispute resolution mechanisms are available for PPP agreements?		
Court litigation	✓	✓
Local arbitration	✓	✓
International arbitration	✓	✓
Has the country signed New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?	✓	✓

Note:

^a Depends on specific circumstances.

Project contract disputes, which relate to the civil relationship between equal parties, could be settled by civil action or civil arbitration.

Project approval and administrative regulation disputes, which relate to the administrative acts of administrative organs or their personnel, may be settled by administrative reviews or administrative litigation.

However, in practice, the distinctions may not be so clear and enforcement of dispute resolution provisions in contracts may face challenges. For example, Article 12 of the new Administrative Litigation Law provides that courts shall accept cases where the administrative organs fail to perform in accordance with an agreement or illegally change or terminate government concession agreements.

On average, it takes around 26 weeks to enforce an arbitration award rendered in the PRC, from filing an application to a writ of execution attaching assets (assuming there is no appeal), and 31 weeks for a foreign award. One significant difference between the recognition or enforcement of domestic and international arbitration decisions is that a court's refusal to enforce a foreign arbitral must be approved by the Supreme People's Court, reflecting the pro-arbitration stance of the law of the PRC.

The China International Economic and Trade Arbitration Commission is one of the major permanent arbitration institutions in the world. The PRC made the following reservations to the New York Convention toward the Recognition and Enforcement of Foreign Arbitral Awards:

- (i) The PRC will apply the convention, only on the basis of reciprocity, to the recognition and enforcement of arbitral awards made in the territory of another contracting state.

- (ii) The PRC will apply the convention only to differences arising out of legal relationships, whether contractual or not, which are considered as commercial under the national law of the PRC.

It should be noted that the position of the Government of the PRC is very powerful in relation to a civil contract and, in reality, may not be controllable under civil law in the same way as the systems in most countries. A legal dispute between a foreign party and the government is a complex problem.

8.1.1.10 Lender's Security Rights

	2016	2017
Does the law specifically enable lenders the following rights?		
Security over the project assets	✓	✓
Security over the land on which they are built (land use right)	✓	✓
Security over the shares of PPP project company	✓	✓
Can there be a direct agreement between government and lender? ^a	✓	✓
Do lenders get priority in the case of insolvency?	✗	✗
Can lenders be given step-in rights?	✓	✓

Note: May depend on the type of government agency.

There are no specific provisions in the PPP regulations governing lenders' security rights, but the law of the PRC allows for security over these types of assets generally, although while lenders get priority in the case of liquidation or bankruptcy, this is not the case for insolvency only. In terms of step-in rights, it may be possible for lenders to negotiate this on an individual contract basis. However, in practice, it is not common.

8.1.1.11 Termination and Compensation

	2016	2017
Does the law specifically enable compensation payment to private partner in case of early termination due to:		
Public sector default or termination for reasons of public interest	✓	✓
Private sector default	✓	✓
Force majeure	✓	✓
Does the law enable the concept of economic/financial equilibrium?	✓	✓

	2016	2017
Does the law enable compensation payment to private partner due to:		
Material adverse government action	✓	✓
Force majeure	✓	✓
Change in law	✓	✓

The yellow indicators above reflect the fact that the law does not prohibit the parties from agreeing to such compensation, but does not specifically refer to these causes for termination and requires compensation in such events and, therefore, they may be possible to negotiate on an individual contract basis.

Based on Article 24 of the MOF PPP guidelines, in case of force majeure or systemic financial risks, the procurement authority and private operator/project company can negotiate amendments to the agreed terms of the contract while under Article 11 of the MOF PPP guidelines, risks of natural disasters and other force majeure events shall be jointly assumed by both parties—the government shall bear the risks in relation to policy and law, and the private operator shall bear commercial risks in relation to project design, construction, finance, and operation and maintenance. Additionally, according to the concession measures, where the anticipated profits of concessionaires are damaged due to amendments to laws and administrative regulations, policy adjustments, or where concessionaires are required to provide products or services other than those stipulated in the agreements according to the needs of public interests, concessionaires shall be compensated.

8.1.1.12 Government Support

	2016	2017
Is project development fund available?	✓	✓
Land acquisition support from the government		
Resettlement and/or compensation cost to residents at the project site	✓	✓
Imposed limits on timeframe to complete land acquisition (day)	no data	no data
Is there dedicated agency to streamline land acquisition?	✗	✗
Exemption from/reduction of land use fees ^a	✓	✓
Viability gap fund (VGF)	✓	✓
Limits to VGF as a percentage of projects capital cost	none	none
Government guarantees:		
Currency inconvertibility and transfer risk	✗	✗
Foreign exchange risk	✗	✗

	2016	2017
War and civil disturbance risk	x	x
Breach of contract risk	x	x
Regulatory risk	x	x
Expropriation risk	x	x
Government payment obligation guarantee	✓	✓
Credit guarantees	x	x
Minimum demand/revenue guarantee	✓	✓
Availability-/performance-based payment contracts^b	✓	✓
Tax subsidies	✓	✓

Notes:

^a While the government support with land acquisition costs may be available, it is not a legal requirement and would need to be negotiated on an individual contract basis.

^b These are mentioned in PPP guidelines but not specifically in the PPP law, so it may be possible to negotiate on an individual contract basis. Traditionally, this is the case for power and water projects.

Details of available government support for PPP projects in the PRC are shown in Table 8.1.

Table 8.1: Details of Available Government Support for PPP Projects in the People's Republic of China

Government Support Type	Comments
Land acquisition and resettlement	<p>Considering the state ownership and collective ownership of land in the PRC, PPP projects would acquire land by free allocation, leasing, or compensated transfer.</p> <p>The MOF PPP contract guidelines indicate that the government should assist the project company in land acquisition and bear the related costs. However, it is not legally enforceable and, in practice, the support from the government in relation to land acquisition and resettlement would depend on individual contract negotiation.</p>
Viability gap fund (VGF)	<p>The concession measures also provide that the payment or subsidy by the government in VGF concession projects shall be linked to the government's annual budget and midterm fiscal planning to ensure the requirements of fund appropriation. In practice, the VGF can take different forms such as investment subsidies, equity investment, concessional loans, and grant of other developing and operating rights and interests related to concession projects. In some projects applying the VGF mechanism, the government takes partial payment responsibility during the operation period.</p>

continued on next page

Table 8.1 *continued*

Government Support Type	Comments
Government guarantees	<p>According to the law, state organizations are not permitted to provide guarantees, except in the case of securing loans, for on-lending, from a foreign government or an international economic organization as approved by the State Council. In practice, minimum offtake undertakings are prevailing in the energy and water sectors. The payment made by the government is subject to the government fiscal budget. Historically, the most popular method of local government to provide comfort on payment to the private investor under a PPP contract is to confirm to the private investor that the expenditure of the PPP project will be listed in the local annual budget of the payment year. However, this does not constitute any legally enforceable guarantee. According to the Guidelines on Promoting PPP in Public Service, the PRC will set up systems to guarantee sustained and healthy development of the PPP model by including operating subsidies, correct operating charges, and other considerations in the annual budget and medium-term financial planning; it will reflect and manage the same in the government's financial reports, and report to the People's Congress at the same level or to its standing committee.</p> <p>However, in past projects, revenue guarantees were provided for certain road and railway PPP projects, and payment and tariff rate guarantees, as well as revenue subsidies, were provided for renewable energy and water projects.</p>
Availability-/performance-based payment mechanism	<p>According to the MOF PPP contract guidelines, the government may consider availability-/performance-based payment if PPP projects comply with the following terms:</p> <ul style="list-style-type: none"> • Relative to the actual use of the facility or service, the government is more concerned about the availability of the facility or service, for example, the Olympic Stadium. • Compared with the project company, the government has more control over the demand of the project facility or service, which requires the government to bear the demand risk.
Tax subsidies	<p>Fiscal subsidy is mentioned by many of the regulations. Guidelines on Promoting PPP in Public Service mentioned tax policy as a potential government support for PPP, although this is not a legal requirement. PPPs are often eligible for industry-based tax rebate.</p>

MOF = Ministry of Finance, PPP = public-private partnership, PRC = People's Republic of China.

Source: Mott MacDonald.

PPP projects that received government support	1990–2016	1990–2017	In 2017
Viability gap fund	no data	no data	no data
Government guarantees	85	85	–
Availability-/performance-based payment basis	358	61	3

8.1.1.13 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Power purchase agreement	x	x
Capacity take-or-pay contract	x	x
Fuel supply agreement	x	x
Transmission and use of system agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

There are no standard contracts issued by the government pursuant to the PPP regulations other than the contract guidelines. However, there are many industry-specific contracts available that may be used in certain sectors and provinces.

8.1.2 Institutional Capacity for Implementation

8.1.2.1 Institutional Setup

	2016	2017
Is there a specialized government agency (or agencies) established for PPP purposes (e.g., a PPP unit)?	✓	✓
What role does this PPP unit have?		
Guidance to and coordination between other government agencies	✓	✓
Supporting (e.g., PPP project preparation, appointment of advisers, and running project development fund)	x	x
Appraisal of PPP project feasibility studies	✓	✓
Approval of PPP project	x	x
Procurement	x	x
Managing, monitoring, and enforcing ongoing PPP contracts	✓	✓

Details of PPP-promoting institutions in the PRC are shown in Table 8.2.

Table 8.2: PPP-Promoting Institutions in the People's Republic of China

Institution	Role in Promoting PPP
Ministry of Finance (MOF)	The MOF of the PRC leads the effort to organize and coordinate PPP work and is responsible for developing PPP-related policies and carrying out planning and administration on PPP with other departments including NDRC, Ministry of Housing and Urban–Rural Development, Ministry of Ecology and Environment (formerly known as Ministry of Environmental Protection), People's Bank of China, and China Banking Regulatory Commission. Financial departments at all levels are responsible for PPP project collecting and screening, budget management, fiscal capacity appraisal, cost-effective evaluation, government debt management, and procurement management.
National Development and Reform Commission (NDRC)	The PRC's NDRC participates in PPP policy making, planning, and administration; its subordinate departments at different levels are responsible for PPP project approval and feasibility study ratification.
PPP Center (under MOF)	Carries forward PPP-related policy research, consultation and training, statistics and international communication, among others.

PPP = public–private partnership, PRC = People's Republic of China.

Source: Mott MacDonald.

The MOF and the NDRC have emerged as the main bodies responsible for PPP regulation and oversight, with the MOF retaining primary responsibility for PPP-related regulation and implementation. In December 2014, the MOF formally established a central government “China PPP Center,” responsible for policy research, advice, and training. The MOF and the NDRC have also released several key documents, including various guidelines, a circular on assessing fiscal affordability for PPP projects, and a notice on carrying out PPPs for demonstrative purposes.

	2016	2017
Is there a PPP project pipeline developed and available?	✓	✓
Is preliminary selection of PPP projects consistent with public investment prioritization?	✓	✓
Is there screening/identification methodology to identify a list of potential PPP projects from public investment priority projects?	×	×

For a project to be selected for development under PPP form, it must be in an eligible sector for PPP; it must be consistent with the development master plan and sectoral and regional development plans and with the local socioeconomic development plan; and it must be prioritized by the ministry, ministerial-level agencies, or provincial people's committee.

In December 2014, the MOF announced 30 pilot (demonstration) PPP projects, representing a total investment of CNY180 billion (MOF 2014). Of those 30 projects, 8 are new and 22 are being transferred from local financing platforms. These projects concern water and heat supply, wastewater treatment, waste management, transport, new energy vehicles, environmental restoration, pipe networks, and healthcare and sports facilities.

In 2015, the MOF issued a notice, confirming that the PPP center under the MOF is in charge of developing, operating, and managing a national platform for PPP project information, and all PPP projects should be listed in this platform.

Since then, two further batches of pilot PPP projects have been announced, the latest with 516 projects. These projects are selected from PPP projects proposed by each province as being deemed the most suitable for demonstration of PPP projects.

However, in general, there is no coordinated screening and prioritization approach for all PPPs. Each ministry additionally publishes lists of projects in the sector that it governs, and local people's committees and local departments of planning and investment also publish lists of projects in their governing area. The NDRC has also offered batches of PPP projects, comprising those proposed by subordinate DRCs.

8.1.2.2 Project Preparation

	2016	2017
Number of project appraisal stages^a	3	3
What feasibility analyses are required for the project to be approved as a PPP?		
Technical feasibility	✓	✓
Financial feasibility	✓	✓
Legal feasibility	✓	✓
Environmental and social sustainability	✓	✓
Value for money assessment	✓	✓
Fiscal affordability assessment	✓	✓
PPP structuring and risk allocation	✓	✓
Initial market testing	✗	✗
Number of approvals to be obtained by the public sector to get the final go-ahead to commence PPP project procurement	2	2
Is the approval from the Ministry of Finance (MOF) or equivalent required before commencement of procurement?	✗	✗
Is it a normal practice to appoint independent, international, and qualified advisors to assist the government with project preparation?	✗	✗

Note:

^a This may vary depending on the type of project.

The indicators marked in yellow in the table above reflect the fact that, while the MOF guidelines state the need for a full range of feasibility studies to be conducted, there is no overarching legal requirement for these to be undertaken prior to a PPP project being approved.

The PRC's State Council and governments at all levels have circulated a series of policy documents to promote a wide use of PPP. The MOF has introduced the MOF PPP guidelines and MOF PPP contract guidelines, and has proclaimed special financial subsidy policies targeting sponge cities and underground utility tunnel projects. Currently, the MOF is engaged in developing guidelines on financial support to PPP projects.

In 2015, the MOF also issued both guidelines for verification of fiscal capacity relating to PPP projects and guidelines for value for money (VFM) assessment. A project must pass a VFM assessment and fiscal capacity verification in order for the PPP mode to be applied.

While not a legal requirement, according to the MOF guidelines, there are three project appraisal stages before being selected as a PPP project (although, these will not necessarily apply to concession projects under the concession measures):

- (i) The PRC's finance departments (PPP centers, where applicable) at different levels of government confer with relevant administrative departments to appraise potential PPP projects and determine feasible ones.
- (ii) Finance departments confer with relevant administrative departments to carry out VFM assessment.
- (iii) Finance departments (PPP centers, where applicable) conduct fiscal capacity appraisal to assess affordability.

Regarding the role of independent advisors, the indicator marked in yellow in the table above reflects the fact that mobilizing independent consultants to review PPP projects is now the usual practice. However, these consultants are usually not international consultants, perhaps due to the language barrier.

8.1.2.3 Risk Allocation

	2016	2017
Preferred risk allocation matrix as reference	✓	✓

The MOF PPP guidelines include general risk allocation principles, but these are not legally enforceable and the parties may provide a specific risk allocation mechanism in negotiating the PPP contract. According to the MOF PPP guidelines, risks shall be allocated among the government and the private capital according to the principle of risk allocation optimization, risk return equivalence, and risk controllable, and upon overall consideration of the management capability on government risk, the project return mechanism, and the management capability on market risk. According to the guidelines, in principle, the commercial risks, including design, construction, finance, and operation and maintenance of the project, shall be borne by the private sector, and the risk of laws, policies, and minimum requirements shall be borne by the government. Force majeure and other risks shall be borne by the parties jointly on a reasonable basis. The NDRC also provided a similar risk allocation principle and arrangement in the Guiding Opinions of the NDRC on launching the cooperation between governments and social capitals promulgated by it.

8.1.2.4 Procurement

	2016	2017
Is competitive bidding the only method for PPP partner selection?		
In case of competitive tender:		
Is prequalification required?	✓	✓
Minimum time allowed to submit prequalification/expression of interest (day)	15	15
Minimum time allowed to submit a bid:		
Domestic bidding (day)	20	20
International bidding (day)	no data	no data
Is negotiation available?	✓	✓
Is there any process allowing unsuccessful bidders to challenge the award/complain?	✓	✓
If yes, maximum time allowed to submit a complaint starting from announcement of the preferred bidder	7 days	7 days
Maximum time limit from bid closing date until selection of the preferred bidder	no data	no data
Maximum time limit from selection of the preferred bidder until signing the contract	30	30
Transparency. Which of the following is published?		
Procurement notice	✓	✓
Q&A during bid clarification stage	×	×
Evaluation results to bidders	✓	✓
Award notice	✓	✓
Contract	✓	✓
Confidentiality	✓	✓

The indicators marked in yellow in the table above reflect the fact that there are guidelines advocating these procedures, though they are not legally required.

The features of the procurement process are in Table 8.3:

Table 8.3: PPP Procurement Process in the People's Republic of China

Theme	Description
Responsible agency	According to the MOF PPP guidelines, local government authorities (e.g., county or municipal), departments, or nonprofit institutions appointed by the local government can prepare and procure an individual PPP project.
Project announcement	Per the administrative measures for the government procurement under PPP projects, prequalification shall apply to PPP project procurement. An announcement of prequalification shall be released via the government procurement information release media designated by the relevant finance department of the people's government at or above the provincial level. The time period for submission of application documents for prequalification shall not be less than 15 working days from the date of release of the announcement. The announcements will all be published on the PRC PPP center website: http://www.cpppc.org/ .
Prequalification invitation documentation	Evaluation method and criteria, draft contracts, and other legal instruments. The procurement documents shall point out the variable details of the project contract during the negotiation for confirming procurement results. The PPP procurement documents shall also expressly state that the project contract must be submitted to the people's government at the corresponding level for approval, and shall not take effect until it is approved.
Prequalification evaluation criteria	Not specified
Prequalification evaluation method	Not specified
Shortlist	
Request for proposal documentation	Not specified
Methods of interactions with the bidders	Question and answers in writing Pre-bid conferences
Evaluation of technical proposals	Not specified
Evaluation of financial proposals	Not specified
Investor selection	
Contract negotiation	Preferred bidder is invited for negotiations

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Table 8.3 continued

Theme	Description
Investment agreement signing	Following negotiation, the project implementing agency shall sign the confirmation of negotiation memorandum and publicize the procurement result along with procurement documents, correspondence documents, addenda, and the contract drafted in the confirmation of negotiation memorandum. Key promises and technical documents submitted by the private party shall be attached in the contract.
Application for and issuance of an investment registration certificate and establishing the project enterprise	
Contract signing	

MOF = Ministry of Finance, PPP = public-private partnership, PRC = People's Republic of China.

The above provisions apply to PPP projects under the Circular on Issuing the Administrative Measures for Government Procurement under Public-Private Partnership Projects. However, it is not clear whether these requirements will all apply, for example, to “concession” projects under the concession measures.

8.1.3 PPP Market Maturity

	1990– 2016	1990– 2017	In 2017
Cumulative PPP projects that reached financial close	1,112	1,151	39
PPP projects currently in preparation	n/a	n/a	2
PPP projects currently in procurement	n/a	n/a	-

8.1.4 Financial Facilities

	1990– 2016	1990– 2017	In 2017
Cumulative PPP projects with foreign lending participation	14	15	-
Cumulative PPP projects that received export credit agency/ international financing institution support	25	25	-

	2016	2017
Availability of nonrecourse/limited recourse hard currency loan	✓	✓
Maximum tenor (year)	15 years	15 years
Up-front arrangement fee	no data	no data
Floor rate (reference rate)	LIBOR	LIBOR
Margin rate	200–300 bps	200–300 bps
Availability of nonrecourse/limited recourse local currency loan	✓	✓
Maximum tenor (year)	15 years	15 years
Up-front arrangement fee	no data	no data
Floor rate (reference rate)	PBOC benchmark rate	PBOC benchmark rate
Margin rate	no data	no data
Political risk cover premium	no data	no data
Availability of interest rate swaps	✓	✓
Forward duration of interest rate swap (year)	no data	no data
Availability of currency swaps	✓	✓
Forward duration of currency rate swap (year)	no data	no data
Project financing through project bond issuance	✓	✓
Percentage of project bonds out of total debt for project financing	<30%	<30%
Availability of project financing from local public sector banks	✓	✓
Max tenor for loan from local public sector banks (year)	>10 years	>10 years
Percentage of foreign debt out of total debt for project financing	<30%	<30%
Typical debt to equity ratio	80:20	80:20
Timeline to financial close	6–12 months	6–12 months
Minimum DSCR covenant levels	no data	no data

bps = basis points, DSCR = debt–service coverage ratio, LIBOR = London interbank offered rate, PBOC = People's Bank of China.

The project finance market is in its nascent stage in the PRC with a variety of structures being seen on different projects. While “PPP structures” are being used in projects, there are elements of “local flavor” in these financing structures, including structures which are more likened to deferred payment and asset securitization schemes rather than international norms of non-resource project financing.

The Government of the PRC has also been proactively promoting financial innovation to improve the investment climate by means of developing long-term loan products and setting up governmental guiding fund and industrial investment fund.

Under the Regulation on Infrastructure and Public Utility Concessions, which came into effect in June 2015, various financial measures are introduced to positively broaden the financing channels:

- policy or development finance institutions are allowed to provide tailor-made credit support to specific projects, with loan terms of up to 30 years;
- concessionaires will be allowed to create collateral on the receivables of the project to secure the loan to finance the concession project;
- equity investors are encouraged to create industry funds to invest in equity of the project company; and
- concessionaires are encouraged to utilize various funding tools to finance concession projects, such as private equity, corporate bonds, revenue bonds, and project bonds.²

The China Securities Regulatory Commission, the MOF, and the NDRC are encouraging infrastructure PPP projects, which have been operating for at least 2 years with a stable cash inflow, to raise funds by issuing asset-backed securities. This could increase participation from the private sector, shifting from the current participation model which is dominated by SOEs. However, asset-backed securities shall not result in a change of the controlling shareholder’s actual control of the PPP project company and its project operation obligations; otherwise the controlling shareholder can “exit” from the project.

8.2 Roads

8.2.1 Regulatory Framework

8.2.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	40%	40%

² Pinsent Masons. 2015. *PPP in China*. May.

8.2.1.2 Government Contracting Agency

The Ministry of Transport is the government contracting agency.

8.2.1.3 Sector-Specific Regulations

	2016	2017
Does the private partner have a legal right to charge users?	✓	✓

8.2.1.4 Sector Regulators

The Ministry of Transport (MOT) of the PRC is an executive agency under the State Council responsible for road, water, and air transportation.

The main duties of the MOT are to formulate and implement development plans, policies, and standards of industries of road, water, and air transportation; take charge of planning and coordination related to the integrated transport system; promote connection of various modes of transportation; optimize the layout of transportation; and give full play to comprehensive advantages and efficiency of integration, so as to establish a convenient, smooth, effective, safe, and integrated transport system.

8.2.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	×	×
Performance-based operation and maintenance contract	×	×
Engineering procurement and construction contract	×	×

8.2.2 Institutional Capacity for Implementation

8.2.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

On 13 October 2016, the PRC's MOF published a new group of PPP projects with a total investment value of CNY1.17 trillion.

This is the third batch of such demonstration projects following the introduction of PPP in 2014 with 30 pilot PPP projects totaling CNY178.6 billion. The second batch of 206 PPP projects, valued at CNY658.9 billion, came out in 2015.

Overall, the 516 newly announced projects cover the areas of energy, transport, water conservation, agriculture, education, among others. A total of 62 transport projects, valued at CNY506.59 billion, represent 43.3% of the total investment. Among the transport projects, there are 26 motorway projects valued at CNY368.94 billion and 16 "Grade A" highways valued at CNY50.11 billion.

A full list of the PPP pipeline projects, including road projects, can be downloaded at <http://www.cpppc.org/zh/zyxmqd/4125.jhtml>.

The fourth batch of PPP demonstration projects, published by MOF on 6 February 2018, includes a total of 396 projects that cover almost all sectors, among which five sectors account for more than 20 projects selected. Among the selected projects, 163 are in the municipal works sector, accounting for 41% of all the demonstration projects; 41 are in the transport sector, accounting for 10%; and 37 are in the ecological construction and environmental protection sector, making up 9%.

In the transport sector, there are 19 motorway projects valued at CNY193 billion and 6 highway projects valued at CNY15.8 billion.

A full list of the fourth batch of PPP demonstration projects, including road projects, can be downloaded at <http://www.cpppc.org/u/cms/ppp/201802/06102852dyxb.xls>.

8.2.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

8.2.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	13	13	-
Unsolicited bids	-	-	-

	1990– 2016	1990– 2017	In 2017
Competitive bidding process	13	17	4
PPP projects currently in procurement	n/a	n/a	-

8.2.3 Features of Past PPP Projects

8.2.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	139	143	4
PPP projects that reached financial close (\$ million)	32,543	33,819	1,277

8.2.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	no data	no data	-
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	-	-	0%

8.2.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	no data
Government guarantees:			
Minimum traffic/revenue guarantees	3	3	-
Projects on availability-/performance-based payment basis	-	1	1

8.2.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism			
User-paid contracts	8	8	-
Government-paid contracts	3	7	4

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	✓	✓
Advertising	✓	✓

8.2.3.5 Tariffs

Provinces have financed the majority of the capital cost from borrowing (and some budget funds). Special purpose companies are formed or selected by provinces to construct and operate the roads, usually on a case-by-case basis (i.e., with each company responsible for a specific section of the expressway). The companies have also raised capital through direct investment, public listing, and securitized lending. Road tolls have been widely used to help contribute to or recover financing costs (and costs of operation and maintenance). As a result, most expressways are tolled.

Toll collection is currently decentralized based on the tolls established by individual companies or, in some cases, based on a provincial system under which tolls are collected by the province and reallocated to the companies operating in the provinces. Toll rates are set provincially by each Provincial Pricing Commission based on applications submitted by toll companies. Toll rates typically take into account the rates in adjacent provinces. However, because of the large number of provinces and companies involved, there is considerable variability.

8.2.3.6 Risk Allocation

Typical risk allocation arrangements in road PPP contracts are provided in Table 8.4.

Table 8.4: Typical Risk Allocation Arrangements in Road PPP Contracts in the People's Republic of China

Risk	Private	Public	Shared	Comment
Traffic risk			✓	
Collection risk	✓			
Competition risk			✓	
Government payment risk		✓		
Environmental and social risk			✓	
Land acquisition risk		✓		
Permits		✓		
Geotechnical risk		✓		
Brownfield risk: inventories studies, property boundaries, project scope		✓		
Political risk		✓		
Foreign exchange risk			✓	

PPP = public-private partnership.

Source: Mott MacDonald.

8.2.4 Local Capabilities

There is strong local capability.

8.2.5 Project Financing

	1990–2016	1990–2017	In 2017
PPP projects with foreign lending participation	2	2	-
PPP projects that received export credit agency/international finance institution support	-	-	-

8.2.6 Challenges

Challenges of PPP progress in the road sector are shown in Table 8.5.

**Table 8.5: Challenges of PPP Progress in the Road Sector
in the People's Republic of China**

Challenges	Currently Implemented Tackling Measures
Revenues of operating toll roads are not able to cover the investment from private party.	Government compensation on land and subsidies allow project company to develop land along the roads.
There are historic projects wherein highway concessions have been overruled post-contract.	Government is introducing PPP law and guidance to avoid such risk in the future.
In development areas of the People's Republic of China, there is often uncertainty about the urbanization planning along transport corridors, and the timing of this development brings uncertainty into the prediction of traffic flows, which, in turn, drives the business case.	Regional development plans can be challenged and interrogated, but there is not much to firm up long-term plans.

PPP = public-private partnership.

Source: Mott MacDonald.

8.3 Railways

8.3.1 Regulatory Framework

8.3.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

8.3.1.2 Government Contracting Agency

No specific government contracting agency is designated for the railway sector in the PRC. China Railway Corporation, as the only national railway operator of the PRC, normally allies with the local governments and establishes a project company, through which the contracts are signed.

8.3.1.3 Sector Regulators

The MOT is the agency currently responsible for railway regulations. It is a member of the State Council of the People's Republic of China.

8.3.1.4 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

8.3.2 Institutional Capacity for Implementation

8.3.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The pipeline of PPP railway projects is shown in Table 8.6.

Table 8.6: PPP Pipeline of Railway Projects in the People's Republic of China

No.	Project Name	Location	Value (\$ million)
1	Ma'anshan Zhengpugang Special railway line PPP project	Ma'anshan, Anhui Province	285
2	Dongying port Shugang Railway PPP project, Dongying, Shandong	Dongying, Shandong Province	824
3	Newly built Weng'an to Machangping railway line, Guizhou Province	Weng'an, Guizhou Province	724

PPP = public-private partnership.

Source: China Public Private Partnerships Center. 2016. *3rd Batch of Demonstration PPP Projects*. <http://www.cpppc.org/zh/zyxmqd/4127.jhtml> (accessed 13 March 2017).

On 13 October 2016, the PRC's MOF published a new group of PPP projects with a total investment value of CNY1.17 trillion.

This is the third batch of such demonstration projects following the introduction of PPP in 2014 with 30 pilot PPP projects totaling CNY178.6 billion. The second batch of 206 PPP projects, valued at CNY658.9 billion, came out in 2015.

The 516 newly announced projects cover energy, transport, water conservation, agriculture, education, among others. A total of 62 transport projects, valued at CNY506.59 billion, represent 12% in quantity and 43.3% in total investment. Among the transport projects, a total of three railway (excluding rail transit) projects, valued at CNY12.641 billion, represent 2% of the total investment.

The fourth batch of PPP demonstration projects published by the MOF on 6 February 2018 includes a total number of 396 projects that cover almost all sectors, in which five sectors have more than 20 projects selected. Among the selected projects, 163 are in the municipal works sector, accounting for 41% of all the demonstration projects; 41 are in the transport sector, accounting for 10%; and 37 are in the ecological construction and environmental protection sector, making up 9%.

The local railway line project located in Shandong province is valued at CNY1.15 billion.

Table 8.7: PPP Railway Projects in Shandong

No.	Project Name	Location	Value (\$ million)
1	Laiwu Gaoxin District local railway (connecting line) project	Laiwu City, Shandong Province	173

8.3.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

8.3.2.3 Procurement

	2016	2017
PPP projects currently in procurement	n/a	-

8.3.3 Features of Past PPP Projects

8.3.3.1 PPP Projects That Reached Financial Close

	1990–2016	1990–2017	In 2017
PPP projects that reached financial close (number)	23	24	1
PPP projects that reached financial close (\$ million)	41,226	48,108	6,882

8.3.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	no data	no data	-
PPP projects with foreign sponsor participation (as a share to the total number of railways PPP projects)	-	-	0%

8.3.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	-	-	-
Government guarantees:			
Minimum traffic/revenue guarantees	3	3	-
Projects on availability-/performance-based payment basis	-	-	-

8.3.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism			
User-paid contracts	8	9	1
Government-paid contracts	-	-	-

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	✓	✓
Advertising	✓	✓
Track access charges	✓	✓

8.3.3.5 Risk Allocation

Typical risk allocation arrangements in road PPP contracts are shown in Table 8.8.

Table 8.8: Typical Risk Allocation Arrangements in Road PPP Contracts in the People’s Republic of China

Risk	Private	Public	Shared	Comment
Demand risk			✓	
Revenue collection risk			✓	
Tariff risk			✓	
Competition risk			✓	
Government payment risk		✓		
Environmental and social risk			✓	
Land acquisition risk		✓		
Utilities relocation risk		✓		
Interface with other transport		✓		
Permits		✓		
Geotechnical risk			✓	
Regulatory risk		✓		
Political risk		✓		
Foreign exchange risk			✓	
Early termination risk			✓	

PPP = public–private partnership.

Source: Mott MacDonald.

8.3.4 Local Capabilities

There is a strong local presence in the rail market, so the construction work will be undertaken by some major SOEs. Design work and operation is also done locally. Foreign corporations are mostly involved with a supervisory or management role, particularly in high-speed railway projects.

8.3.5 Challenges

Challenges of PPP progress in the railway sector are provided in Table 8.9.

Table 8.9: Challenges of PPP Progress in the Railway Sector in the People's Republic of China

Challenges	Currently Implemented Tackling Measures
Lack of comprehensive sector regulations and practical experience	This may be covered by the PPP law and guidance when provided, but the railway sector in any country is quite special and specific, and the general guidance may not be appropriate enough.
The railway sector in the People's Republic of China is almost entirely state-owned and operated with direct control from national government; hence, outsourcing and private partnership is not common and has few precedents.	

PPP = public-private partnership.

Source: Mott MacDonald.

8.4 Ports

8.4.1 Regulatory Framework

8.4.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	100%	100%

8.4.1.2 Government Contracting Agency

This would normally be the local port authority.

8.4.1.3 Sector-Specific Regulations

The Port Law of the PRC is applicable to the planning, construction, maintenance, operation, and administration of ports and other relevant activities.

Provisions on the Administration of Port Operations (2009) regulate the operation of ports.

8.4.1.4 Sector Regulators

Port sector regulatory agencies in the PRC are shown in Table 8.10.

Table 8.10: Port Sector Regulatory Agencies in the People's Republic of China

Agency	Function
Ministry of Transport	Administrates all ports in the People's Republic of China
Local authority	Administrates all ports within jurisdiction

Source: China Report Networks. <http://zhengce.chinabaogao.com/gonggongfuwu/2016/0252345492016.html>.

8.4.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	×	×
Performance-based operation and maintenance contract	×	×
Engineering procurement and construction contract	×	×

8.4.2 Institutional Capacity for Implementation

8.4.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The pipeline of PPP maritime projects is provided in Table 8.11.

Table 8.11: PPP Pipeline of Maritime Projects in the People's Republic of China

No.	Project Name	Location	Value (\$ million)
1	Huanghua port breakwaters extension and port construction project	Cangzhou, Hebei Province	366
2	Pizhou port relocation PPP project	Xuzhou, Jiangsu Province	210
3	Suqian canal Suqian port Yangbei work zone port project	Suqian, Jiangsu Province	145

PPP = public-private partnership.

Source: China Public Private Partnerships Center. 2016. *3rd Batch of Demonstration PPP Projects*. <http://www.cpppc.org/zh/zyxmqd/4127.html> (accessed 13 March 2017).

Only one port project, located in Huai'an city and valued at CNY5.45 billion, was selected in the fourth batch of PPP projects pipeline.

Table 8.12: PPP Pipeline of Port Project in Jiangsu

No.	Project Name	Location	Value (\$ million)
1	Yutai port project	Huai'an City, Jiangsu Province	859

8.4.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

8.4.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	25	25	-
Unsolicited bids	1	1	-
Competitive bidding process	11	11	-
PPP projects currently in procurement	n/a	n/a	-

8.4.3 Features of Past PPP Projects

8.4.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	79	79	-
PPP projects that reached financial close (\$ million)	14,677	14,677	-

8.4.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	no data	no data	no data
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	-	-	-

8.4.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Government guarantees	2	2	-
Projects on availability-/performance-based payment basis	-	-	-

8.4.3.4 Payments Mechanism

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	✓	✓
Wharf charge	✓	✓
Navigation charge	✓	✓
Pilotage charge	✓	✓
Channel access charge	✓	✓

8.4.3.5 Risk Allocation

Typical risk allocation arrangements in port PPP contracts are shown in Table 8.13.

Table 8.13: Typical Risk Allocation Arrangements in Port PPP Contracts in the People's Republic of China

Risk	Private	Public	Shared	Comment
Demand risk	✓			
Competition risk (exclusivity)		✓		
Tariff			✓	
Environmental and social risk			✓	
Land acquisition risk			✓	
Permits		✓		
Geotechnical risk		✓		
Foreign exchange risk			✓	
Political risk		✓		

PPP = public–private partnership.

Source: Mott MacDonald.

8.4.4 Local Capabilities

The PRC, known as a large import and export economy, has built a considerable number of ports and port clusters along its coastline, boosting sea trade industry. There is a strong local presence in the ports industry; some of the largest port enterprises include Shanghai International Port Group, Shenzhen Yantian Port Holdings, Tianjin Port Holdings, Yingkou Port Liability Co. Limited, and Jiangsu Lianyungang Port Co. Other major industry players in the PRC include China COSCO Shipping Corporation Limited, Hutchison Ports, and China Merchants Holdings (International) Information Technology. It is worth noting that China COSCO Shipping Corporation Limited is the merged entity of the two largest port operators—China Ocean Shipping (Group) Company (COSCO) and China Shipping (Group) Company (China Shipping), an SOE headquartered in Shanghai, following the approval from the State Council on 4 January 2016.

8.4.5 Project Financing

	1990–2016	1990–2017	In 2017
PPP projects with foreign lending participation	-	-	-
PPP projects that received export credit agency/international finance institution support	4	4	-

8.4.6 Challenges

Challenges of PPP progress in the port sector are given in Table 8.14.

Table 8.14: Challenges of PPP Progress in the Port Sector in the People's Republic of China

Challenges	Currently Implemented Tackling Measures
Strong competition induced by excessive supply and regional ports expansion	

PPP = public-private partnership.

Source: Mott MacDonald.

8.5 Airports

8.5.1 Regulatory Framework

8.5.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	49%	49%

8.5.1.2 Government Contracting Agency

Various but mostly local authorities.

8.5.1.3 Sector Regulators

Airport sector regulatory agencies in the PRC are provided in Table 8.15.

Table 8.15: Airport Sector Regulatory Agencies in the People's Republic of China

Agency	Function
Ministry of Transport	The ministry is the agency responsible for railway, road, air, and water transportation regulations.
Civil Aviation Administration of China	Oversees civil aviation and investigates aviation accidents and incidents. As the aviation authority responsible for the People's Republic of China, it concludes civil aviation agreements with other aviation authorities, including those of the special administrative regions of the PRC which are categorized as "special domestic." The agency is headquartered in Dongcheng District, Beijing.

Source: Mott MacDonald.

8.5.1.4 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

8.5.2 Institutional Capacity for Implementation

8.5.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The pipeline of PPP airport projects is shown in Table 8.16.

Table 8.16: PPP Pipeline of Airport Projects in the People's Republic of China

No.	Project Name	Value (\$ million)
1	Hohhot new airport	2,947

PPP = public-private partnership.

Source: China Public Private Partnerships Center. 2016. *3rd Batch of Demonstration PPP Projects*. <http://www.cpppc.org/zh/zyxmqd/4127.html> (accessed 13 March 2017).

Hohhot airport is the only airport project listed in the third batch of 516 demonstration PPP projects published by MOF in 2016.

The fourth batch of PPP demonstration projects published by the MOF on 6 February 2018 includes a total of 396 projects.

However, there are no airport projects in the fourth batch of PPP demonstration projects.

8.5.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	1

8.5.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	2	3	1
Unsolicited bids	-	-	-
Competitive bidding process	1	1	1
PPP projects currently in procurement	n/a	n/a	1

8.5.3 Features of Past PPP Projects

8.5.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	12	13	1
PPP projects that reached financial close (\$ million)	1,393	1,538	145

Of the 12 airport PPP projects, eight projects used the build–operate–transfer model, and one project was realized through the rehabilitate–operate–transfer model. Nine of the 12 projects are greenfield projects.

8.5.3.2 Foreign investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	no data	no data	no data
PPP projects with foreign sponsor participation (as a share to the total number of airport PPP projects)	-	-	-

8.5.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	no data
Government guarantees	-	-	-
Projects on availability-/performance-based payment basis	-	-	-

8.5.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism			
User-paid contracts	4	5	1
Government-paid contracts	-	-	-

	2016	2017
What aeronautical revenue streams are allowed?		
Landing fees	✓	✓
Aircraft parking fees	✓	✓
Boarding bridge fees	✓	✓
Terminal service fees	✓	✓
What non-aeronautical revenue streams are allowed?		
Commercial	✓	✓
Ancillary	✓	✓

8.5.3.5 Risk Allocation

Typical risk allocation arrangements in airport PPP contracts are given in Table 8.17.

Table 8.17: Typical Risk Allocation Arrangements in Airport PPP Contracts in People's Republic of China

Risk	Private	Public	Shared	Comment
Traffic risk			✓	
Competition risk (exclusivity)	✓			
Environmental and social risk			✓	
Land acquisition risk		✓		
Permits		✓		
Handover risk			✓	
Political risk		✓		
Foreign exchange risk			✓	

PPP = public-private partnership.

Source: Mott MacDonald.

8.5.4 Local Capabilities

Following the localization reform of the civil airports, all airports are managed by local authorities with the exception of the Beijing Capital Airport, which is governed by the Civil Aviation Administration and airports in the Tibet Autonomous Region (which are governed by the China Civil Aviation Tibet Autonomous Region Authority). Exceptions are some smaller airports, where private sector participation may be involved. However, currently, there is limited local private sector experience in this market.

8.5.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	-	-	-
PPP projects that received export credit agency/international finance institution support	-	-	-

8.5.6 Challenges

Challenges of PPP progress in the airport sector are provided in Table 8.18.

Table 8.18: Challenges of PPP Progress in the Airport Sector in the People's Republic of China

Challenges	Currently Implemented Tackling Measures
Non-aeronautical revenue streams not fully tapped	
Airports and other related activities are usually linked with civil defense and security activity and so are sensitive and are exposed to a high degree of government supervision, making private sector involvement in core aviation activity sensitive.	

PPP = public-private partnership.

Source: Mott MacDonald.

8.6 Energy

8.6.1 Regulatory Framework

8.6.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Power generation	100%	100%
Power transmission	49%	49%
Power distribution	49%	49%
Oil and gas	99%	99%

8.6.1.2 Government Contracting Agency

Following the structural reform, the energy industry in the PRC has been fully marketized. Power generation, power transmission, and distribution and grid system, as well as contracting issues, are mostly undertaken by large SOEs (quasi-government).

8.6.1.3 Sector Regulators

Details of energy sector regulatory agencies in the PRC are shown in Table 8.19.

Table 8.19: Energy Sector Regulatory Agencies in the People's Republic of China

Agency	Function
State Council	<ul style="list-style-type: none"> • Overall regulator for all ministries • Formulating and implementing administrative orders and regulations
National Energy Administration (under NDRC)	<ul style="list-style-type: none"> • Formulating and implementing energy development plans and industrial policies • Promoting institutional reform in the energy sector • Administering energy sectors, including coal, oil, natural gas, power (including nuclear power), new and renewable energy, etc. • Taking charge of energy conservation, comprehensive utilization of resources in the energy sector • Guiding scientific and technological advancement • Organizing and carrying out the research and development of important equipment and guiding the assimilation and innovation of imported complete sets of major equipment • Organizing and coordinating key energy-related demonstration projects and promoting the deployment of new products, new technologies, and new equipment • Approving, reviewing, or examining fixed asset investment projects of the energy sector within national plans and the scale of annual plans in accordance with the authority stipulated by the State Council • Conducting energy forecasting and precaution and participating in energy operation coordination and emergency preparedness • Formulating and implementing national oil reserve plans and policies • Taking the lead in launching international energy cooperation • Participating in the formulation of policies related to energy such as resources, finance and taxation, environment protection, and addressing climate change • Making recommendations on energy price adjustment and imports and exports aggregate • Undertaking the daily work of the National Energy Commission.

continued on next page

Table 8.19 *continued*

Agency	Function
State Electricity Regulatory Commission	<ul style="list-style-type: none"> Regulating the development of electricity markets Advising the NDRC on the setting of tariffs
State-Owned Assets Supervision and Administration Commission	<ul style="list-style-type: none"> Supervises power corporations

NDRC = National Development and Reform Commission.

Source: Mott MacDonald.

8.6.1.4 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Power purchase agreement	x	x
Capacity take-or-pay contract	x	x
Fuel supply agreement	x	x
Transmission and use of system agreement	x	x
Engineering procurement and construction contract	x	x

8.6.2 Institutional Capacity for Implementation

8.6.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

On 13 October 2016, the PRC's MOF published a new group of PPP projects with a total investment value of CNY1.17 trillion.

This is the third batch of such demonstration projects following the introduction of PPP in 2014 with 30 pilot PPP projects totaling CNY178.6 billion. The second batch of 206 PPP projects, valued at CNY658.9 billion, came out in 2015.

The 516 newly announced projects cover energy, transport, water conservation, agriculture, education, among others. A total of 18 energy-related projects are valued at CNY12.64 billion. Among the energy projects, a total of 12 waste-to-energy projects, valued at CNY10.62 billion, represent 84% of the total investment in energy. A photovoltaic PPP project in Tianjin is the only one of its kind in the list.

A full list of the PPP pipeline projects, including energy projects, can be downloaded at <http://www.cpppc.org/zh/zyxmqd/4125.jhtml>.

The fourth batch of PPP demonstration projects published by the MOF on 6 February 2018 includes a total of 396 projects that cover almost all sectors, in which five sectors have more than 20 projects selected. Among the selected projects, 163 are in the municipal works sector, accounting for 41% of all the demonstration projects; 41 are in the transport sector, accounting for 10%; and 37 are in the ecological construction and environmental protection sector, making up 9%. In the energy sector, there are four waste-to-energy projects valued at CNY1.33 billion and one biomass project valued at CNY292 million.

A full list of the fourth batch PPP demonstration projects, including energy projects, can be downloaded at <http://www.cpppc.org/u/cms/ppp/201802/06102852dyxb.xls>.

8.6.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	1

8.6.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	37	37	-
Unsolicited bids	-	-	-
Competitive bidding process	13	13	-
License scheme	29	29	-
PPP projects currently in procurement	n/a	n/a	-

8.6.3 Features of Past PPP Projects

8.6.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
Energy generation			
Renewable energy generation			
Solar (number)	106	119	14
Solar	12,442	13,804	1,362
Wind (number)	84	-	-
Wind	9,714	-	-
Hydro (number)	31	-	-
Hydro	15,555	-	-
Geothermal (number)	-	-	-
Geothermal	-	-	-
Waste/biomass (number)	105	111	7
Waste/biomass	6,465	6,786	321
Thermal energy generation			
Coal (number)	47	47	-
Coal	18,492	18,492	-
Diesel (number)	22	22	-
Diesel	2,210	2,210	-
Natural gas (number)	5	5	-
Natural gas	428	428	-
Total energy generation (number)	400	400	21
Total energy generation	65,306	66,989	1,683

8.6.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation	no data	no data	no data
PPP projects with foreign sponsor participation (as a share to the total number of energy PPP projects)	-	-	-

8.6.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	no data
Government guarantees	28	28	-
Projects on availability-/performance-based payment basis	13	13	-

8.6.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism			
User-paid contracts	-	19	19
Government-paid contracts	266	266	285

8.6.3.5 Tariffs

Is there a system of feed-in tariffs (FIT)*?			✓
Typical FIT levels	Type	\$/kWh	
	Wind	0.08–0.10	
	Hydro	0.03–0.12	

Biomass	0.12
Solar PV	0.14–0.16

PPP = public–private partnership, PRC = People's Republic of China, PV = photovoltaic.

^a FIT rates in the PRC vary with the location of the site of power generation. The above figures represent a general estimation of the range of tariff rates collected at the time of preparation of this document.

Source: Winston and Strawn. 2014. Feed-In Tariff Handbook for Asian Renewable Energy Systems. <http://cdn2.winston.com/images/content/9/1/v2/91697/Feed-In-Tariff-Handbook-for-Asian-Renewable-Energy-Systems.pdf>. <http://bgt.ndrc.gov.cn/zcfb/200907/W020120820329193612794.pdf>.

8.6.3.6 Risk Allocation

Typical risk allocation arrangements in energy PPP contracts are shown in Table 8.20.

Table 8.20: Typical Risk Allocation Arrangements in Energy PPP Contracts in the People's Republic of China

Risk	Private	Public	Shared	Comment
Demand risk			✓	
Revenue collection risk			✓	
Tariff risk			✓	
Government payment risk		✓		
Environmental and social risk			✓	
Land acquisition risk		✓		
Permits		✓		
Handover risk			✓	
Political risk		✓		
Regulatory risk		✓		
Interconnection risk			✓	
Brownfield risk: asset condition			✓	
Grid performance risk	✓			
Hydrology risk			✓	
Exploration and drilling risk	✓			

PPP = public–private partnership.

Source: Mott MacDonald.

8.6.4 Local Capabilities

The PRC has a very strong local capability in the energy sector, particularly the renewables. Currently, the PRC is the world's largest producer of photovoltaic power, accounting for more than 60% of the world's solar photovoltaic output. The PRC also led the world in the production and use of wind power and smart grid technologies. It has also become the world's largest maker of wind turbines.

Most of the large power enterprises are SOEs; the major power generation SOEs are China Datang Corporation, China Yangtze Power Corporation, China Guodian Corporation, China Light and Power Company Syndicate, and China Huaneng Group. Two major grid SOEs are State Grid and China Southern Power Grid.

8.6.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	10	11	1
PPP projects that received export credit agency/international financing institution support	16	16	–

8.6.6 Challenges

Challenges of PPP progress in the energy sector are shown in Table 8.21.

Table 8.21: Challenges of PPP Progress in the Energy Sector in the People's Republic of China

Challenges	Currently Implemented Measures
Transmission capacity of the grid has not kept up with the growth of the PRC's wind farms. Limited connection to the state grid leads to large amount of wind power curtailment.	There has been significant investment into the interconnection of the electricity grid to enable more connection and distribution (power flows) from the northwestern to southeastern areas of the PRC.
Overcapacity in power sector prevails	

PPP = public-private partnership, PRC = People's Republic of China.

Source: Mott MacDonald.

8.7 Water and Wastewater

8.7.1 Regulatory Framework

8.7.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Bulk water supply and treatment	100%	100%
Water distribution	100%	100%
Wastewater treatment	100%	100%
Wastewater collection	100%	100%

8.7.1.2 Government Contracting Agency

There are various contracting bodies in practice, including water companies, local construction bureau, construction committee, water authority, and administration committee of economic development zone, among others.

8.7.1.3 Sector-Specific Regulations

	2016	2017
Can the private sector be given water abstraction rights?	✓	✓
Are there regulations in place on raw water extraction?	✓	✓
Are there regulations in place on the release of treated effluents?	✓	✓

Water abstraction is governed by a “water abstraction permit system,” provided by the 2002 Water Law and the 2006 Regulations on the Administration of Water Abstraction Licensing and Collection of Water Resources Charges. Permits are regulated on an annual basis and must relate to applicable annual water resources regulation plans.

Wastewater discharge is managed through an “urban drainage permit system” under the 2007 Methods on Urban Drainage Permit Management. The quality of the effluent should meet the standards in the 1996 Comprehensive Standard of Sewage Drainage. If wastewater is discharged directly to a watercourse, approval is required under the 2008 Law on the Prevention and Control of Water Pollution from the local environmental protection department.

8.7.1.4 Sector Regulators

Water sector regulatory agencies in the PRC are listed in Table 8.22.

Table 8.22: Water Sector Regulatory Agencies in the People's Republic of China

Agency	Function
State Council of the People's Republic of China	Overall regulator for all ministries Formulates and implements administrative orders and regulations
National People's Congress	Responsible for legislation, law enforcement, and supervision
State-Owned Assets Supervision and Administration Commission	Manages state-owned enterprises
National Development and Reform Commission	Plans the development of fixed assets and allocates capital investment funds Formulates water pollution levy policies and industrial policies affecting wastewater discharge and treatment Formulates wastewater and water pricing policy
Ministry of Water Resources	Manages water resources in the People's Republic of China, including flood control and drought relief, water resource protection, and conservation planning Monitors water quality in rivers and lakes Issues water extraction permits
Ministry of Ecology and Environment (formerly known as Ministry of Environmental Protection)	Supervises and enforces water pollution laws, regulations, water-use planning, watershed, and planning to prevent drinking water sources pollution
Ministry of Housing and Urban-Rural Development	Guides infrastructure construction and development projects, including improvements in urban water supply and urban wastewater treatment facilities
Ministry of Finance	Manages budget allocation, pollution levies, wastewater treatment charges, and water resources fees
Ministry of Natural Resources	Responsible for the planning, administration, protection, and utilization of groundwater Manages sea area use and protection Supervises desalination projects Urban and rural planning management
State Forest and Grassland Administration (formerly known as the State Forest Administration)	Oversees the management of state forest resources in relation to controlling water and soil erosion

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Table 8.22 *continued*

Agency	Function
Ministry of Transport	Responsible for water pollution control within the transportation sector
National Health Commission (formerly known as Ministry of Health)	Regulates drinking water standards

Source: Mott MacDonald.

There are five levels of administration in the PRC: central government, provincial government, prefectural government, county-level government, and townships. In addition, provinces are permitted to pass their own water laws provided they do not conflict with the national law.

Furthermore, since the PRC's fiscal system is decentralized, governments at the provincial level and below have their own revenue streams and are mostly responsible for all public expenditure including water supply, environmental protection, and urban maintenance. Provincial governments have a wide range of responsibilities, such as regulating utilities, approving municipal tariffs, monitoring compliance with environmental and other standards, and approving the construction of water and wastewater infrastructure projects.

The overall governance is complicated and inefficient, as there are overlaps in function and authority and competition for limited budgets and power. Coupled with corruption, decision-making processes may be for personal interest, and well-meaning policies put in place may not be successfully implemented.

8.7.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	×	×
Performance-based operation and maintenance contract	×	×
Engineering procurement and construction contract	×	×

8.7.2 Institutional Capacity for Implementation

8.7.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

Various strategies address the water sector:

No. 1 Document

- Published yearly to highlight issues of top priority to the government.
- 2016 No. 1 Document focuses on rural issues, and includes water resources management.

12th Five-Year Plan (12FYP) from 2011 to 2015 and 13th Five-Year Plan (13FYP) from 2016 to 2020

- Water Development Plan 2011–2015 was issued in line with 12FYP.
- Stricter punishments under the revised environmental protection law in 13FYP.

Water Pollution Prevention and Control Action Plan, also known as Water Ten Plan

- Launched on 16 April 2015.
- Covers 10 general measures, with 38 submeasures.
- Total of 238 specific actions to be achieved by 2020.

While there are ambitious targets set, there seems to be an absence of documents outlining the amount of investment required or plans to procure the funding required to achieve these targets.

For PPP projects, a China Public–Private Partnerships Center was established to provide technical and organizational support for the advancement of PPP, and promote the development of PPP in a coordinated manner.

On 13 October 2016, the PRC's MOF published a new group of PPP projects with a total investment value of CNY1.17 trillion.

This is the third batch of such demonstration projects following the introduction of PPP in 2014 with 30 pilot PPP projects totaling CNY178.6 billion. The second batch of 206 PPP projects, valued at CNY658.9 billion, came out in 2015.

The 516 newly announced projects cover the areas of energy, transport, water conservation, agriculture, education, among others. A total of 64 water and wastewater projects, valued at CNY33.4 billion, represent 2.8% of the total investment. Among the water and wastewater projects, a total of 40 wastewater projects (valued at CNY18.14 billion) represent 54% of the total water and wastewater investment, while 24 water supply projects (valued at CNY15.26 billion) represent 46%.

A full list of the PPP pipeline projects, including energy projects, can be downloaded at <http://www.cpppc.org/zh/zyxmzd/4125.jhtml>.

The fourth batch of PPP demonstration projects published by the MOF on 6 February 2018 includes a total of 396 projects that cover almost all sectors, in which five sectors have more than 20 projects selected. Among selected projects, 163 are in the municipal works sector, accounting for 41% of all the demonstration projects; 41 are in the transport sector, accounting for 10%; and 37 are in the ecological construction and environmental protection sector, making up 9%.

In the water and wastewater sector, there are 18 water supply and drainage projects valued at CNY12.3 billion and 36 wastewater treatment projects valued at CNY14.9 billion.

A full list of the fourth batch PPP demonstration projects, including water and wastewater projects, can be downloaded at <http://www.cpppc.org/u/cms/ppp/201802/06102852dyxb.xls>.

8.7.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	1

8.7.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	86	86	–
Unsolicited bids	–	–	–
Competitive bidding process	233	245	12
PPP projects currently in procurement	n/a	n/a	–

8.7.3 Features of Past PPP Projects

8.7.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	469	481	12
PPP projects that reached financial close (\$ million)	12,676	13,303	627

8.7.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	no data	no data	no data
PPP projects with foreign sponsor participation (as a share to the total number of water PPP projects)	-	-	-

8.7.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	no data
Government guarantees	49	49	-
Projects on availability-/performance-based payment basis	45	47	2

8.7.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism			
User-paid contracts	34	41	7
Government-paid contracts	340	345	5

8.7.3.5 Tariffs

Water prices have historically been low in the PRC, despite legislation to set tariffs at cost-recovery levels. Water supply is a reasonably mature market in the PRC, whereas the wastewater market is largely reliant on government subsidies due to its low price. Contrary to the pricing mechanism in traditionally mature water markets where the wastewater usually costs more than water supply, in the PRC, the wastewater price is only about half of the price for water supply.

8.7.3.6 Risk Allocation

Typical risk allocation arrangements in water PPP contracts are shown in Table 8.23.

Table 8.23: Typical Risk Allocation Arrangements in Water PPP Contracts in the People's Republic of China

Risk	Private	Public	Shared	Comment
Demand risk	✓	✓		Water demand risk is borne by the private sector in water distribution projects.
Revenue collection risk			✓	
Tariff risk		✓		
Government payment risk			✓	
Environmental and social risk			✓	Environment risk of sludge is unclear and weak.
Land acquisition risk		✓		
Interface risk			✓	
Handover risk				Should be monitored in the future as most of the water PPP projects have not entered this stage yet.
Political risk		✓		
Foreign Exchange risk			✓	

PPP = public–private partnership.

Source: Mott MacDonald.

8.7.4 Nonrevenue Water and Infiltration

Nonrevenue water (%)	20.54
Nonrevenue water (m³/km/day)	36.96
Infiltration	no data

m³/km/day = cubic meter per kilometer per day.

Source: IBNET. 2012. *Country Profile China—Quick Outlook*. https://database.ib-net.org/country_profile?ctry=83.

8.7.5 Local Capabilities

There is strong local presence in the PRC, including local utility operators, contractors, or suppliers.

8.7.6 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	2	2	-
PPP projects that received export credit agency/international financing institution support	5	5	-

8.7.7 Challenges

Challenges of PPP progress in the water sector are provided in Table 8.24.

Table 8.24: Challenges of PPP Progress in the Water Sector in the People's Republic of China

Challenges	Currently Implemented Tackling Measures
Uncertain government policies due to change of major government leaders	
Major asset replacement phase is quite short	





PPP = public-private partnership.

Source: Mott MacDonald.

8.8 Social Infrastructure

8.8.1 Regulatory Framework

8.8.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Healthcare infrastructure	70% 	70% 
Healthcare services	no data	no data
Education infrastructure	no data	no data
Education services	49% 	49% 

	2016	2017
Government buildings	no data	no data
Prisons and correction centers	no data	no data
Social housing	no data	no data
Sport and leisure facilities	no data	no data

8.8.1.2 Government Contracting Agency

Various national or local health and family planning commissions, the NDRC as well as local authorities and local development and reform commission (DRC).

8.8.1.3 Sector-Specific Regulations

	2016	2017
Can the private sector be given rights to provide education services?	✓	✓
Can the private sector be given rights to provide healthcare services?	✓	✓

8.8.1.4 Standard Contracts

	2016	2017
What standardized contracts are available and used in the market?	×	×
PPP/concession agreement	×	×
Performance-based operation and maintenance contract	×	×
Engineering procurement and construction contract	×	×

8.8.2 Institutional Capacity for Implementation

8.8.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

On 13 October 2016, the PRC’s MOF published a new group of PPP projects with a total investment value of CNY1.17 trillion.

This is the third batch of such demonstration projects following the introduction of PPP in 2014 with 30 pilot PPP projects totaling CNY178.6 billion. The second batch of 206 PPP projects, valued at CNY658.9 billion, came out in 2015.

Of the 516 newly announced projects, a total of 16 hospital projects have been announced, valued at CNY9.5 billion, which represents 0.8% of the total investment. In addition, 16 education projects, valued at CNY9.1 billion, are also included in the third batch of demonstration projects.

A full list of the PPP pipeline projects, including road projects, can be downloaded at <http://www.cpppc.org/zh/zyxmqd/4125.jhtml>.

The fourth batch of PPP demonstration projects published by the MOF on 6 February 2018 includes a total of 396 projects that cover almost all sectors, in which five sectors have more than 20 projects selected. Among selected projects, 163 are in the municipal works sector, accounting for 41% of all the demonstration projects; 41 are in the transport sector, accounting for 10%; and 37 are in the ecological construction and environmental protection sector, making up 9%.

In the social infrastructure sector, a total of 85 projects cover the areas of education, tourism, social housing, and sports; total investment value reached CNY77.8 billion.

A full list of the fourth batch PPP demonstration projects, including social infrastructure projects, can be downloaded at <http://www.cpppc.org/u/cms/ppp/201802/06102852dyxb.xls>.

8.8.3 Challenges

Table 8.25: Challenges of PPP Progress in the Social Infrastructure Sector in the People’s Republic of China

Challenges	Currently Implemented Tackling Measures
Wholly foreign-owned hospitals are not included in the national healthcare system and, therefore, revenue relies solely on patients’ out-of-pocket fees. It is not clear whether PPPs could be included in the national healthcare system.	
For foreign investors, there are no favorable policies in terms of land, electricity, water, gas, among others; operating costs are much higher than those of local competitors.	

continued on next page

Table 8.25 *continued*

Challenges	Currently Implemented Tackling Measures
Financial Viability—Hospital revenue relates to patient use and relies heavily on the national healthcare system and patient fees, with limited government subsidy. It also incentivizes overprescription. Except for larger hospitals in the major cities, where demand from more affluent patients is high, operational budgets for hospitals may be insufficient without significantly higher government subsidy or improved healthcare system coverage.	
Lack of patient referral schemes results in little control over patient attendances at different healthcare facilities.	

PPP = public–private partnership.

Source: Mott MacDonald.

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8.9.2 People's Republic of China

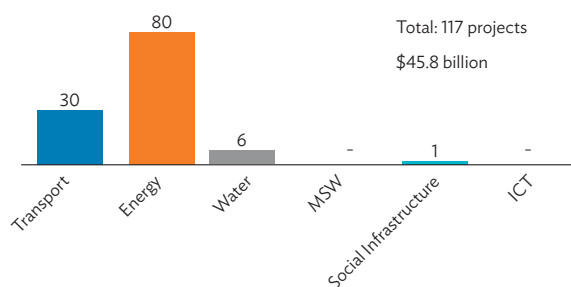
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9. PHILIPPINES

The Philippines¹ was the first country in Asia to institutionalize private sector participation in infrastructure and development projects by enacting the build–operate–transfer (BOT) law in 1990. In 2010, the Government of the Philippines announced public–private partnerships (PPPs) as a key component of its overall strategy for inclusive growth and initiated governance reforms to the BOT framework. These reforms included establishing the PPP Governing Board (PPPGb), a PPP Center, and a project development and monitoring facility to provide financial support for preparing PPP projects. In 2016, the new government included the PPP program in its 10–point economic program highlighting the Philippines’ commitment to facilitating private participation in infrastructure investment. Local government unit (LGU)–PPPs is a priority investment area in the 2017 Investment Priority Plan, consistent with the current administration’s directive to accelerate infrastructure development in the countryside.

Figure 9.1: PPP Projects in the Philippines that Have Reached Financial Close, 1990–2017

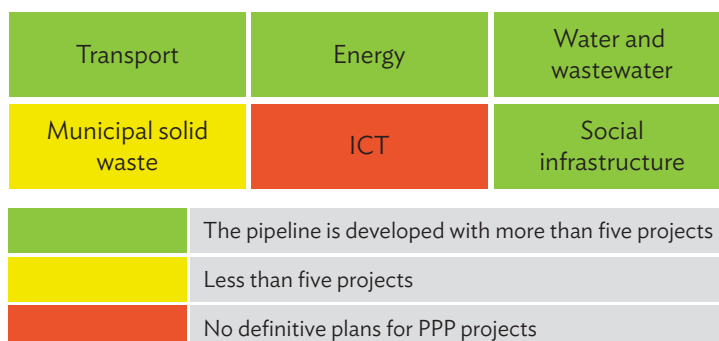


ICT = information and communication technology, MSW = municipal solid waste, PPP = public–private partnership.

Sources: IJGlobal. *IJGlobal Project Finance and Infrastructure Journal*. <http://www.ijglobal.com>; World Bank Group. 2015. *World Bank Asia Pacific Private Participation in Infrastructure (PPI) Database*. <http://ppi.worldbank.org/> (accessed 9 February 2018).

The PPP Center has proved to work efficiently in facilitating PPP project preparation and development, building capacity of government contracting agencies (GCAs), advocating policy reforms, monitoring implementation of PPP projects, and building up a PPP knowledge system. The PPP Center is building up partnerships with other organizations that aim to accelerate infrastructure development in the countryside, such as the Mindanao Development Authority,

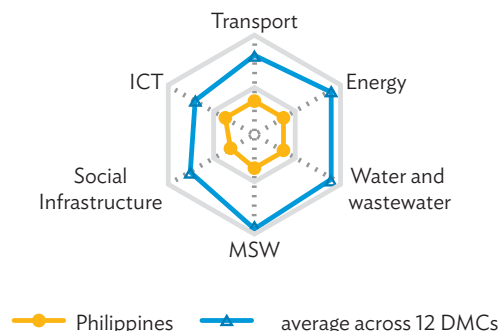
¹ The *PPP Monitor* is envisaged to be a dynamic product and comments for improving data quality are welcome and can be incorporated in future editions. It should also be noted that the report is using standardized definitions which may not match a particular developing member country’s definitions. For the meaning of each indicator, please refer to the Appendix.

Figure 9.2: Availability of PPP Pipelines in the Philippines by Sector

ICT = information and communication technology, PPP = public-private partnership.

Note: The projects included are published in the official sources.

Source: Mott MacDonald.

Figure 9.3: Maximum Allowed Foreign Ownership of Equity in Greenfield PPP Projects in the Philippines (%)

DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

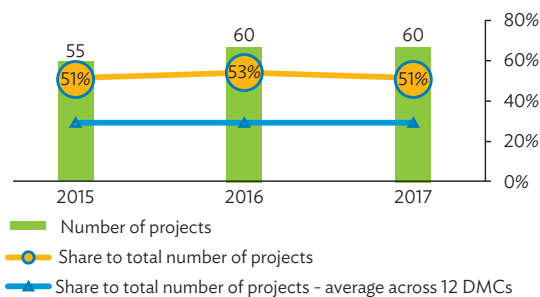
Source: Mott MacDonald.

the Development Academy of the Philippines, and the League of Cities of the Philippines. The project preparation and bidding are generally carried out using experienced, international transaction advisers from the Project Development and Monitoring Facility.

While much has been achieved in developing the PPP market in the Philippines, challenges remain. One challenge is the current limit of 40% of foreign ownership in the PPP project company in infrastructure projects where the operation requires a public utility franchise. This may restrict competition and, in some ways, can inhibit Philippine infrastructure development. However, the incumbent government has indicated that this issue will be addressed when amendments to the 1987 Constitution are made during the current political term.²

² Jiao, C. 2017. Business Look Forward to Government Relaxing Foreign Ownership Rules. CNN. 7 January. https://ppp.gov.ph/?in_the_news=businesses-look-forward-to-govt-relaxing-foreign-ownership-rules.

Figure 9.4: PPP Projects in the Philippines with Foreign Sponsor Participation, 1990–2017



Source: Mott MacDonald.

Figure 9.5: Share of PPP Projects in the Philippines with Foreign Sponsor Participation by Sector, 1990–2017

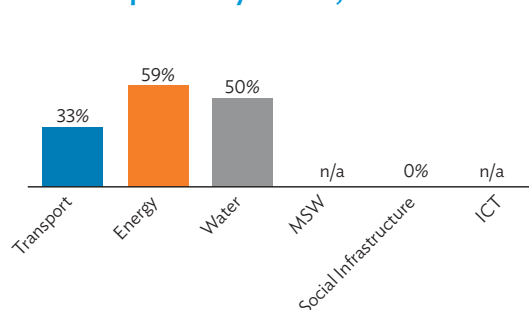
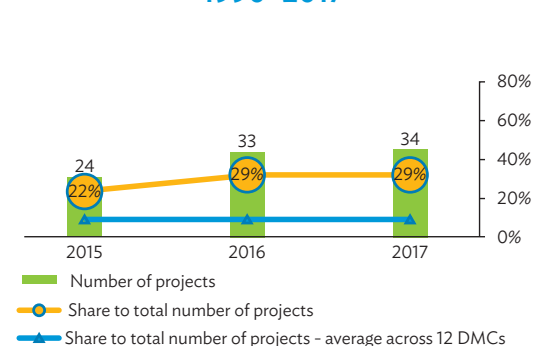


Figure 9.6: PPP Projects in the Philippines with Foreign Lender Participation, 1990–2017



Source: Mott MacDonald.

Figure 9.7: Share of PPP Projects in the Philippines with Foreign Lender Participation, 1990–2017

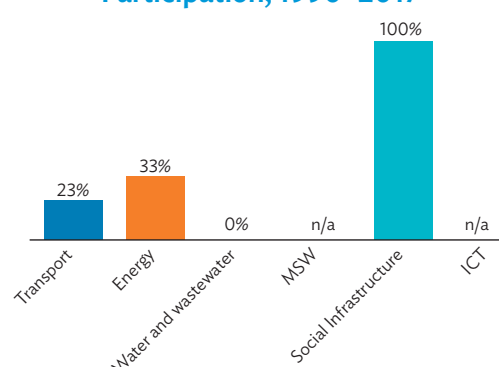
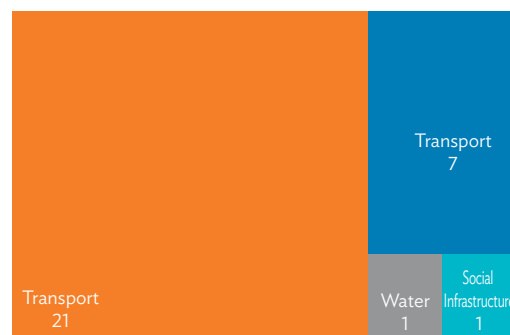


Figure 9.8: PPP Projects in the Philippines Currently in Preparation, 2017



Source: Mott MacDonald.

Figure 9.9: PPP Projects in the Philippines Currently in Procurement, 2017



Despite the restriction, there has been a relatively large share of projects with foreign investors participation over 1990–2017. The project financing scenario in the Philippines is dominated by local banks due to their aggressive lending backed by the very liquid debt market. Their strong relationships with local conglomerates, plus the requirement for loans to be in local currency, give the local banks a distinct advantage over foreign loans in terms of pricing. Furthermore, domestic banks do not require any political risk guarantee, unlike the international lenders, and offer relatively terms which are light on covenants.

Key Developments from 2016

Key developments over 2016–2017 include issuance of

- PPPGB Policy Circular No. 05A–2016 updated by 05B–2017 on Policy Circular on appointment of probity advisors for PPP procurement, which details and institutionalizes the appointment of probity advisors for PPP procurements; and
- PPPGB Code of Conduct for the PPP Governing Board, which establishes the guidelines for ethical standards of conduct of the PPP Governing Board.

The government has been looking into the Philippines' bond market as another alternative source of financing for PPP projects. In 2016, the Asian Development Bank (ADB) provided support for the issuance of the Philippines' first peso-denominated green project bond for the refinancing of the Tiwi and Makiling–Banahaw (Tiwi–MakBan) geothermal facilities.

In late 2016, the Securities and Exchange Commission (SEC) approved the listing of PPP companies in the stock exchange, which will widen the source of equity funding for PPPs.

The government and the PPP Center are taking steps to address other challenges affecting the pace of PPP project completion, such as coordinating multiple government authorities for decision making, delays in project procurement, changes in project structure and source of funding during the tender process, and engaging local governments to PPPs. The government is in the process of Drafting amendments to the BOT Law through a PPP act, which will further improve the enabling environment for PPPs.

9.1 Country Profile

9.1.1 Regulatory Framework

9.1.1.1 PPP Law

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

The key general PPP regulation in the Philippines is Republic Act No. 6957 (1990) as amended by Republic Act No. 7718 (1994), named Build-Operate-Transfer Law (BOT Law), supported by revised Implementing Rules and Regulations of Republic Act No. 6957, as amended by Republic Act No. 7718 (the IRR).

There is also a number of supporting republic acts, executive orders, and policy circulars to strengthen the policy and institutional environment for PPPs.

9.1.1.2 PPP Types

	2016	2017
Number of PPP types defined in the PPP regulations	9	9

The following types of PPP arrangement are legally defined:

- build-operate-transfer,
- build-transfer-operate,
- build-transfer,
- build-own-operate,
- build-lease-transfer,
- contract-add-operate,
- develop-operate-transfer,
- rehabilitate-operate-transfer, and
- rehabilitate-own-operate.

Other contract variations are possible but must be approved by the President of the Philippines.

9.1.1.3 Eligible Sectors

	2016	2017		2016	2017
Transport			Energy		
Roads	✓	✓	Power generation	✓	✓
Railways	✓	✓	Power transmission	✓	✓
Ports	✓	✓	Power distribution	✓	✓
Airports	✓	✓	Oil and gas ^a	✗	✗
Water and wastewater	✓	✓	Information and communication technology	✓	✓
Municipal solid waste	✓	✓	Social infrastructure	✓	✓

Note: The oil and gas sector is not expressly included in the enumeration in the BOT Law. Nevertheless, the BOT Law provides that other infrastructure and development projects may also be proposed if authorized by the appropriate agency.

The IRR lays out a broad range of eligibility criteria for PPP infrastructure facilities, including

- highways, including expressways, roads, bridges, interchanges, tunnels, and related facilities;
- railways or rail-based projects that may or may not be packaged with commercial development opportunities;
- nonrail-based mass transit facilities, navigable inland waterways, and related facilities;
- port infrastructures such as piers; wharves; quays; storage, handling, and ferry facilities, and related facilities;
- airports, air navigation, and related facilities;
- power generation, transmission, subtransmission, distribution, and related facilities;
- telecommunications, backbone network, terrestrial and satellite facilities, and related service facilities;
- information technology and data base infrastructure, including modernization of information technology, geospatial resource mapping, and cadastral survey for resource accounting and planning;
- irrigation and related facilities;
- water supply, sewerage, drainage, and related facilities;
- education and health infrastructure;
- land reclamation, dredging, and other related development facilities;
- industrial and tourism estates or townships, including ecotourism projects such as terrestrial and coastal/marine nature parks, and related infrastructure facilities and utilities;
- government buildings and housing projects;
- markets, slaughterhouses, and related facilities;
- warehouses and postharvest facilities;
- public fish ports and fishponds, including storage and processing facilities;
- environmental and solid waste management-related facilities such as, but not limited to, collection equipment, composting plants, landfill, and tidal barriers; and
- climate change mitigation and adaptation infrastructure projects and related facilities.

9.1.1.4 Other Applicable Restrictions

	2016	2017
Project funding structure	In case the project requires a public utility franchise, and the project is financed by official development assistance of foreign governments or institutions, the share of official development assistance funding shall not exceed 50% of the project cost, and the balance to be provided by the project proponent.	
Project capital investment size	none	none
Filipino labor requirement	In the case of foreign contractors, Filipino labor shall be employed or hired in the different phases of construction where Filipino skills are available.	

9.1.1.5 Unsolicited Bids

	2016	2017
Acceptance of unsolicited proposals	✓	✓
Eligibility of the project proponent to have:		
Competitive advantage at bid evaluation	✗	✗
Swiss challenge	✓	✓
Compensation of the project development cost	✗	✗
Government support for land acquisition and resettlement cost	✗	✗
Government support in the form of viability gap fund and guarantees	✗	✗

Unsolicited proposals are generally accepted, provided certain conditions are met:

- Project involves new concept or technology and/or is not part of the list of priority projects.
- No direct government guarantee, subsidy, or equity is required.
- The implementing authority/local government units (LGUs) have invited, by publication in a newspaper of general circulation for three consecutive weeks, comparative or competitive proposals.

Projects included in the government list of priority projects are not eligible for unsolicited bids unless they involve a new concept or technology. Three unsolicited proposals are officially in the PPP pipeline:

- East-West Rail;
- Manila Bay Integrated Flood Control, Coastal Defense and Expressway Project; and
- Bulacan Airport Project.

9.1.1.6 Institutional PPPs

	2016	2017
Are institutional PPP arrangements allowed (e.g., joint venture between government or state-owned enterprises and private firms as a special purpose vehicle company)?	✓	✓
	1990–2016	1990–2017 In 2017
Institutional PPP projects (number)	13	13
Institutional PPP projects (as a share to the total number of PPP projects)	12%	n/a

Section 2.1 of the IRR defines the role of government-owned and/or -controlled corporations (GOCCs) as the GCA.

9.1.1.7 Land Rights

	2016	2017
Which of the following is permitted to the private partner:		
Transfer land lease/use/ownership rights to third party	✓	✓
Use leased/owned land as collateral	✓	✓
Mortgage leased/owned land	✓	✓
Is there a legal mechanism for granting wayleave rights, for example, laying water pipes or fiber cables over land occupied by persons other than the government or the private partner?	✓	✓
Is there a land registry/cadastre with public information on land plots?	✓	✓
Which of the following information on land plots is available to the private partner:		
Appraisal of land value	✓	✓
Landowners	✓	✓
Land boundaries	✓	✓
Utility connections	x	x
Immovable property on land	✓	✓
Plots classification	✓	✓

Republic Act No. 8974 (2000) and No. 10752 (2016) facilitate the acquisition of right-of-way, site, or location for national government infrastructure projects. For PPP projects, the private sector might be requested to either finance the right-of-way cost which can be recovered partly or fully by the investor from the tolls, fees, or tariffs to be charged to the users of the completed project, or advance the funds covering the cost of the right-of-way which will be reimbursed later by the implementing agency, with the exception of unsolicited proposal.

According to the 1987 Constitution, private ownership of the land is only allowed for corporations which are at least 60% owned by Filipino citizens. Public land cannot be owned irrespective of company ownership structure and can only be leased from the government.

9.1.1.8 Environmental and Social Issues

	2016	2017
Is there a local regulation establishing a process for environmental impact assessment?	✓	✓
Is there a legal mechanism for the private partner to limit environmental liability for what is outside of its control or caused by third parties?	✓	✓
Is there a local regulation establishing a process for social impact assessment?	✓	✓
Is there involuntary land clearance for PPP projects?	✓	✓

The project implementation is subject to the implementing rules and regulations of Presidential Decree No. 1586, otherwise known as the Philippine Environmental Impact Statement System. Presidential Decree No. 1586 requires a project proponent to conduct an environmental impact assessment (EIA) to ensure that all possible environmental effects of the project are addressed, in line with the country's overall goal of sustainable development. The Environmental Management Bureau of the Department of Environment and Natural Resources (DENR) shall conduct a review of the EIA, the environmental risk analysis, and the proposed mitigation measures. The review shall also cover the integration of climate change adaptation measures and disaster risk reduction, if any, as well as a review of the environmental monitoring and management plan for the project. The DENR then issues the Environmental Clearance Certificate, which is necessary to obtain before the commencement of project construction.

The process for social compliance is regulated by a number of regulations among those including the Right-Of-Way Act No. 10752 (2016) and PPPGB Policy Circular No. 10-2016 on public consultations and engagement for PPP projects.

The land can be expropriated. The property owner is given 30 days to decide whether to accept the offer as payment for the property. Upon refusal or failure of the property owner to accept such an offer, expropriation proceedings can be initiated.

9.1.1.9 Foreign Investor Participation Restrictions

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Transport			Energy		
Roads	40%	40%	Power generation	40%	40%
Railways	40%	40%	Power transmission	40%	40%
Ports	40%	40%	Power distribution	40%	40%

Maximum allowed foreign ownership of equity in greenfield projects					
Airports	40%	40%	Oil and gas	40%	40%
Water and wastewater			Municipal solid waste	40%	40%
Bulk water supply and treatment	40%	40%	Social infrastructure		
Water distribution	40%	40%	Healthcare infrastructure	40%	40%
Wastewater treatment	40%	40%	Healthcare services	40%	40%
Wastewater collection	40%	40%	Education infrastructure	40%	40%
Information and communication technology			Education services	0%	0%
Fixed line infrastructure	40%	40%	Government buildings	no data	no data
Fixed line services	40%	40%	Prisons and correction centers	no data	no data
Wireless/mobile infrastructure	40%	40%	Social housing	no data	no data
Wireless/mobile services	40%	40%	Sport and leisure facilities	no data	no data

President Rodrigo Duterte indicated in 2017 that, as part of the government's current plans to amend the 1987 Constitution, he is keen to ease limitations on foreign ownership during his term.³

Is there any restriction for foreign investors on?	2016	2017
Land use/ownership rights as opposed to similar rights of local investors	yes	yes
Currency conversion	no	no

In case an infrastructure facility's operation requires a public utility franchise, the facility operator must be a Filipino, or if a corporation, it must be duly registered with the SEC and owned up to at least 60% by Filipinos. In the case of foreign contractors, Filipino labor shall be employed or hired in the different phases of construction where Filipino skills are available.

³ PPP Center. PPP in the News. https://ppp.gov.ph/?in_the_news=businesses-look-forward-to-govt-relaxing-foreign-ownership-rules.

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	60	60	-
PPP projects with foreign sponsor participation (as a share to the total number of PPP projects)	53%	51%	-

9.1.1.10 Dispute Resolution and Enforcement Mechanism

	2016	2017
Can a foreign law be chosen to govern PPP contracts?	x	x
What dispute resolution mechanisms are available for PPP agreements?		
Court litigation	✓	✓
Local arbitration	✓	✓
International arbitration	✓	✓
Has the country signed New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?	✓	✓

Despite its transparency, the dispute resolution mechanism is still considered as inefficient and time-consuming, and would involve costly court processes. Typically, the resolution of disputes is left to the discretion of parties, including the use of alternative dispute resolution with agreements citing international arbitration as a mechanism of choice. Executive Order No. 78 of 6 July 2012 mandates alternative dispute resolutions on all PPP contracts.

In the Philippines, the Alternative Dispute Resolution Act (Republic Act No. 9285) provides that international commercial arbitration shall be governed by the UN Commission on International Trade Law Model Law (Chapter 4, section 19) and contains provisions on international commercial arbitration (sections 19–31). Domestic arbitration is governed by the Arbitration Law (Republic Act No. 876), and by certain provisions of the UN commission Model Law.

The Philippines ratified the New York Convention with the reservation that it does so on the basis of reciprocity, and will apply the convention to the recognition and enforcement of awards made only in the territory of another contracting state and only to differences arising out of legal relationships, whether contractual or not, which are considered as commercial under the national law of the state making such a declaration.

Neither online alternative dispute resolution nor fast-track arbitration is currently available in the Philippines.

Strictly speaking, there is no consolidated law encompassing all aspects of commercial mediation or conciliation in the Philippines. Commercial mediation in the Philippines generally consists of two kinds: (i) voluntary mediation and (ii) compulsory or court-annexed mediation.

9.1.1.11 Lender's Security Rights

	2016	2017
Does the law specifically enable lenders the following rights?		
Security over the project assets	✓	✓
Security over the land on which they are built (land use right)	✓	✓
Security over the shares of a PPP project company	✓	✓
Can there be a direct agreement between the government and lenders?	✓	✓
Do lenders get priority in the case of insolvency?	✗	✗
Can lenders be given step-in rights?	✓	✓

Security over the shares of a PPP project company and the possibility of a direct agreement between the government and project lenders are not explicitly stated in the regulations; however, it is possible on a contract case-by-case basis.

Domestically owned companies can get security over land on a case-by-case basis.

9.1.1.12 Termination and Compensation

	2016	2017
Does the law specifically enable compensation payment to the private partner in case of early termination due to:		
Public sector default or termination for reasons of public interest	✓	✓
Private sector default	✓	✓
Force majeure	✓	✓
Does the law enable the concept of economic/financial equilibrium?	✓	✓
Does the law enable compensation payment to the private partner due to:		
Material adverse government action	✓	✓
Force majeure	✓	✓
Change in law	✓	✓

PPPG Policy Circular No. 06-2015 on Termination Payment for PPP Projects introduced regulation of events that trigger termination and compensation payment, among these force majeure and private sector default. Until then, regulations allowed compensation payable to the private sector only in case of adverse public sector actions or public sector defaults.

9.1.1.13 Government Support

	2016	2017
Is project development fund available?	✓	✓
Land acquisition support from the government:		
Resettlement and/or compensation cost to residents at the project site	✓	✓
Imposed limits on time frame to complete land acquisition (day)	×	×
Is there dedicated agency to streamline land acquisition?	×	×
Exemption from/reduction of land use fees	×	×
Viability gap fund (VGF)	✓	✓
Limits to VGF as a percentage of projects capital cost	50%	50%
Government guarantees^a:		
Currency inconvertibility and transfer risk	×	×
Foreign exchange risk	×	×
War and civil disturbance risk	×	×
Breach of contract risk	✓	✓
Regulatory risk	×	×
Expropriation risk	×	×
Government payment obligation guarantee	✓	✓
Credit guarantees	✓	✓
Minimum demand/revenue guarantee	×	×
Availability-/performance-based payment contracts	✓	✓
Tax subsidies	✓	✓

^a Section 13.3 of the BOT Law Implementing Rules and Regulations explicitly states what type of guarantees could be provided (marked as green in the table). Where regulation is silent on the respective type of guarantee and precedents in practice are unknown, the indicator is marked as red.

Details of available government support for PPP projects in the Philippines are provided in Table 9.1.

Table 9.1: Details of Available Government Support for PPP Projects in the Philippines

Government Support Type	Comments
Project development fund	PDMF was established with assistance from development partners, the Australian Agency for International Development, and the Asian Development Bank. The fund is managed by the PDMF committee (National Economic and Development Authority, Department of Finance, Department of Budget and Management, and PPP Center) with an aim to develop a robust pipeline of properly prepared and well-structured PPP projects. It can be tapped to finance pre-investment studies, to prepare tender documents and draft contracts, bidding processes, and contract negotiations to bid award stage, as well as to ensure effective monitoring of project implementation. External advisers from a PDMF panel of prequalified consulting firms may assist in the structuring of PPP projects, conducting business case or prefeasibility studies or feasibility studies for PPPs, and preparing detailed engineering. As a revolving fund, reimbursement of the PDMF support is a condition precedent for contract award to the winning project proponent.
Land acquisition and resettlement	Support for land acquisition and resettlement cost could be provided by the implementing agency/local government unit on a case-by-case basis only for solicited projects.
Viability gap fund (VGF)	Government can provide VGF through the SSF. Under the SSF, the government provides a lump sum appropriation in the annual budgets of implementing agencies engaged in PPPs to fund the government's share for PPP project components. The budget will be used for right-of-way acquisition, resettlement, government's counterpart fund for the construction, and other related costs. In addition, in 2015, the government institutionalized provision of VGF through PPP Governing Board Policy Circular 04-2015 on VGF.
Government guarantees	May be provided in the form of credit enhancement, covering contingent liabilities in particular government contracting agencies obligations under PPP contracts. Few past Investment Priorities Plan contracts also received tariff rate guarantees.
Availability- /performance-based payment contracts	Availability- and performance-based payment schemes are allowed under build-transfer-operate arrangement, and have been implemented in practice in Investment Priorities Plan projects, bulk water supply, and social infrastructure projects.
Tax subsidies	There are investment incentives as established under Omnibus Investment Code of 1987, subject to the compliance of the project with the criteria, as may be set by the Board of Investment. Renewable energy projects receive special incentives under Republic Act No. 9513, otherwise known as the "Renewable Energy Act of 2008," and Republic Act No. 7156, otherwise known as the "Mini-Hydroelectric Power Incentives Act."

PDMF = Project Development and Monitoring Facility, PPP = public-private partnership, SSF = strategic support fund.

Source: Mott MacDonald research undertaken in the first quarter of 2017.

PPP projects that received government support	1990– 2016	1990– 2017	In 2017
Viability gap fund	2	2	-
Government guarantees	13	13	-
Availability-/performance-based payment basis	79	79	-

Exhaustive data on PPP projects that received government support in the form of land acquisition and viability gap fund (VGF) have not been available. However, it is known that the Mactan–Cebu Airport PPP project received land acquisition support, while the Tarlac–La Union Toll Expressway and Daang Hari–South Luzon Expressway Link Road projects received VGF. As for projects that received government guarantees, these are all energy generation projects with the exception of the Metro Rail Transit (MRT) Line 3 project.

Energy generation projects constitute 96% of projects on availability-/performance-based payment basis, with the remaining being in the railways, water, and social infrastructure sectors.

9.1.1.14 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Power purchase agreement	x	x
Capacity take-or-pay contract	x	x
Fuel supply agreement	x	x
Transmission and use of system agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

It was previously understood that the PPP Center is currently developing a standard PPP concession agreement. As of February 2018, there has been no update on this.

9.1.2 Institutional Capacity for Implementation

9.1.2.1 Institutional Setup

	2016	2017
Is there a specialized government agency (or agencies) established for PPP purposes (e.g., PPP unit)?	✓	✓
What role does this PPP unit have?		
Guidance to and coordination between other government agencies	✓	✓
Supporting (e.g., PPP project preparation, appointment of advisers, running PDF)	✓	✓
Appraisal of PPP project feasibility studies	✓	✓
Approval of PPP projects	✓	✓
Procurement	×	×
Managing, monitoring, and enforcing ongoing PPP contracts	✓	✓

PPP-promoting institutions in the Philippines are listed in Table 9.2.

Table 9.2: PPP-Promoting Institutions in the Philippines

Institution	Role in Promoting PPP
PPP Governing Board	Responsible for overall policy-making for all PPP-related matters, including the Project Development and Monitoring Facility. It is also responsible for setting the strategic direction of the PPP program and creating an enabling policy and institutional environment for PPPs.
PPP Center under National Economic and Development Authority	Acts as a secretariat of the PPP Governing Board with the following functions: <ul style="list-style-type: none"> • conduct project facilitation and assistance to the national implementing agencies, including government corporations, and LGUs in addressing impediments or bottlenecks in the implementation of PPP programs and projects; • provide advisory services, technical assistance, trainings, and capacity development to agencies/LGUs in PPP project preparation and development; • recommend plans, policies, and implementation guidelines related to PPPs in consultation with appropriate oversight committees, implementing agencies, LGUs, and the private sectors;

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Table 9.2 *continued*

Institution	Role in Promoting PPP
	<ul style="list-style-type: none"> • manage and administer a revolving fund to be known as the Project Development and Monitoring Facility for the preparation of business case, prefeasibility and feasibility studies, and tender documents of PPP programs and projects; • monitor and facilitate the implementation of the priority PPP programs and projects of the agencies/LGUs, which shall be formulated by respective agencies/LGUs in coordination with the National Economic and Development Authority secretariat; • establish and manage a central database system of PPP program and projects; • recommend improvements to timelines in processing PPP programs and project proposals, and monitor compliance of all agencies/LGUs; and • prepare reports on the implementation of the PPP programs and projects of the government for submission to the President of the Philippines at the end of each year.

LGU = local government unit, PPP = public-private partnership.

Source: Public-Private Partnership Center. <http://ppp.gov.ph/>.

9.1.2.2 Project Planning

	2016	2017
Is there a PPP project pipeline developed and available?	✓	✓
Is preliminary selection of PPP projects consistent with public investment prioritization?	✓	✓
Is there screening/identification methodology to identify a list of potential PPP projects from public investment priority projects?	✓	✓

The PPP Center manages and updates a PPP project pipeline, which is available online.

Implementing agencies and LGUs have to prepare infrastructure or development programs to identify specific priority projects that may be implemented as a PPP, and to submit them to the National Economic and Development Authority (NEDA) Board or to the Investment Coordination Committee (ICC) for approval. The list of priority projects shall be consistent with the Philippines' Development Plan and Provincial Development and Physical Framework Plan.

In 2015, the PPP Governing Board (PPPGb) issued Policy Circular 02-2015 for implementing agencies to use multicriteria analysis to identify and prioritize PPP projects from the list of priority projects.

9.1.2.3 Project Preparation

	2016	2017
Number of project appraisal stages	2	2
What feasibility analyses are required for the project to be approved as a PPP?		
Technical feasibility	✓	✓
Financial feasibility	✓	✓
Legal feasibility	✓	✓
Environmental and social sustainability	✓	✓
Value for money assessment	✓	✓
Fiscal affordability assessment	✓	✓
PPP structuring and risk allocation	✓	✓
Initial market testing	✓	✓
Number of approvals to be obtained by public sector to get final go-ahead to commence PPP project procurement	1/2	1/2
Is the approval from the Ministry of Finance or equivalent required before commencement of procurement?	✓	✓
Is it a normal practice to appoint independent, international, and qualified advisors to assist the government with project preparation?	✓	✓

During 2015–2016, the PPPGB issued a number of policy circulars on PPP project preparation and appraisal to provide greater details and clarity on the required feasibility analyses, which are aimed at all government contracting agencies (GCAs). An update has been made to the policy circular regarding appointment of probity advisors for PPP Procurement. Additionally, a circular establishing the code of conduct for PPPGB was released in August 2017. Until then, only internal NEDA guidelines existed for projects prepared by the PPP Center.

The PPP Center, through the Project Development and Monitoring Facility, manages a panel of independent international advisers who assist in the structuring of PPP projects, conducting business case or prefeasibility studies or feasibility studies for PPPs.

National PPP projects with a total value of more than ₱300 million (around \$6 million) must be approved by the NEDA Board in addition to approval of the ICC. On average, the process of obtaining necessary approvals takes 182 calendar days.⁴

⁴ World Bank. 2017. *Benchmarking PPP Procurement in Philippines*. https://library.pppknowledgelab.org/documents/4062/download?ref_site=kl.

9.1.2.4 Risk Allocation

	2016	2017
Preferred risk allocation matrix as reference	✓	✓

The Generic Preferred Risk Allocation Matrix was adopted by the ICC-Cabinet Committee on 7 December 2010 and published and updated by the PPP Center. It is intended to be recommendatory and is envisioned to serve as reference of the ICC and the proponent agencies in the ICC review of PPP projects. It identifies the party that could best handle the risk involved in undertaking a PPP project, including some proposed mitigating strategies and contractual provision for each risk.

9.1.2.5 Procurement

	2016	2017
Is competitive bidding the only method for PPP partner selection?		
In case of competitive tender:		
Prequalification required?	✓	✓
Minimum time allowed to submit prequalification/expressions of interest (day)	15	15
Minimum time allowed to submit a bid:		
Domestic bidding (day)	60	60
International bidding (day)	60	60
Is negotiation available?	×	×
Is there a process allowing unsuccessful bidders to challenge the award/make a complaint?	✓	✓
If yes, maximum time allowed to submit a complaint starting from announcement of a preferred bidder	15	15
Maximum time limit from bid closing date until selection of a preferred bidder	146	146
Maximum time limit from selection of a preferred bidder until signing the contract	37	37
Transparency. Which of the following is published?		
Procurement notice	✓	✓
Q&A during bid clarification stage	✓	✓
Evaluation results to bidders	✓	✓

	2016	2017
Award notice	✓	✓
Contract	✗	✗
Confidentiality	✓	✓

The features of the PPP procurement process are presented in Table 9.3.

Table 9.3: PPP Procurement Process in the Philippines

Theme	Description
Responsible agency	<p>Host agency or LGU refers to any department, bureau, office, commission, authority, or agency of the national government, including government-owned and/or -controlled corporations, government financial institutions, and state universities and colleges authorized by law or their respective charters to contract for or undertake infrastructure or development projects.</p> <p>Following project and contract approval, the host agency/LGU must set up a prequalification, bids, and awards committee consisting of at least a third-ranking regular official of the host agency as chairperson, a legal officer, a technical officer knowledgeable of the technical aspects of the project, a finance officer, a management/operation officer, two representatives from the private sector (one from recognized contractor associations and the other from either facility users or recognized accounting associations), a representative from the Commission on Audit, a PPP Center for national projects representative, a local government office representative (LGU projects only). The committee shall be responsible for all aspects of the pre-bidding and bidding processes.</p>
Project announcement	<p>Announcement of a project's invitation to tender or request for proposal is organized by the responsible agency—both on its website and in local newspapers. For project values of at least ₱500 million, publication on at least one international newspaper is required. After obtaining approval for the project, project announcement must be made once every week for 3 consecutive weeks, in at least two newspapers of general circulation, and in at least one local newspaper of general circulation in the region, province, city, or municipality in which the project is to be implemented.</p>
Prequalification invitation documentation	<p>Guiding information for the investors:</p> <ul style="list-style-type: none"> • general requirements for the investors • requirements on investors' qualifications and experience regarding project implementation and financial-commercial capability <p>Note: In the exigence of service, the host agency may opt to do a simultaneous qualification, instead of a prequalification, of proponents. In this case, the bidders shall be asked to submit their proposal in three envelopes: the qualification documents corresponding to the requirements, the technical proposal, and the financial proposal. The period for the preparation of the qualification documents shall be subsumed under the time allotted for bid preparation.</p>

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Table 9.3 *continued*

Theme	Description
Prequalification evaluation criteria	Legal requirement (local/foreign-owned entity), experience, or track record in terms of the firm's experience, key personnel experience, and financial capability in terms of debt and equity.
Prequalification evaluation method	The prequalification evaluation method is not defined.
Shortlist	Shortlist is announced. In case only one investor registers and satisfies the requirements of the invitation for prequalification or only one investor passes the prequalification, direct negotiation is possible.
Request for proposal documentation	<ul style="list-style-type: none"> • Instructions to bidders, including <ul style="list-style-type: none"> – general project description and objectives; – contractual arrangements; – bid submission procedures and requirements; – investment incentives and government undertakings; – bid security and bid security validity period; – milestones; – evaluation methods and criteria; – minimum equity amount; – formula and appropriate indices to be used in the adjustments of tolls/fees/rentals/charges, when applicable; – requirements and timelines/milestones of concerned agencies in granting of franchise, if applicable; – requirements of concerned regulatory bodies; – current rules and regulations of the Bangko Sentral ng Pilipinas; – revenue-sharing arrangements; – expected commissioning date; and – national and ownership requirements • Minimum design, performance specifications, and economic parameters • Draft contract • Bid forms • Forms of bid and performance securities • Other documents as may be deemed necessary by the agency/LGU concerned
Methods of interactions with the bidders	<ul style="list-style-type: none"> • Extension and award notices in writing • Bid conferences
Evaluation of technical proposals	<ul style="list-style-type: none"> • Technical soundness (preliminary engineering design): The basic engineering design of the project should conform to the minimum design and performance standards and specifications set by relevant agency/LGU as prescribed in the bidding documents. The engineering surveys, plans, and estimates should be undertaken within $\pm 20\%$ of the final quantities. The construction methods and schedules should also be presented and shown to be feasible or “doable.”

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Table 9.3 continued

Theme	Description
	<ul style="list-style-type: none"> Operational feasibility: The proposed organization, methods, and procedures for operating and maintaining the completed facility must be well defined, should conform to the prescribed performance standards, and should be shown to be workable. Where feasible, it should provide for the transfer of technology used in every phase of the project. Environmental standards: The proposed design and the technology of the project to be used must be in accordance with the environmental standards set forth by the Department of Environment and Natural Resources, as indicated in the bid documents. Any adverse effects on the environment as a consequence of the project, as proposed by the prospective project proponent, must be properly identified, including the corresponding corrective/mitigating measures to be adopted. Project financing: The proposed financing plan should positively show that the same could adequately meet the construction cost as well as the operating and maintenance costs requirements of the project. Relevant agency/LGU shall assess the financing proposals of the bidders if the same matches and adequately meets the cost requirements of the project under bidding.
Evaluation of financial proposals	<p>Evaluation of financial proposals is carried out only for investors who satisfy the above technical requirements. Evaluation can be done based on any one or more of the following methods:</p> <ul style="list-style-type: none"> lowest proposed toll, fee, rental, or charge at the start of project operation, if a pre-agreed parametric tariff adjustment formula is prescribed in the bid document; lowest present value of the government subsidy to be provided for the period covered by the contract; highest present value of proposed payments to the government, such as concession fees, lease/rental payments, fixed/guaranteed payments, and/or variable payments/percentage shares of revenue for the period covered by the contract; or any other appropriate financial bid parameter as may be approved by the approving body. <p>In the case of the build–transfer and build–lease–transfer schemes, a Filipino project proponent who submits an equally advantageous bid with exactly the same price and technical specifications as that of a foreign project proponent shall be given preference.</p>
Investor selection	Investor is selected.
Contract negotiation	<p>Negotiated contracts are allowed under direct negotiation when there is only one complying bidder or unsolicited proposals.</p> <p>For negotiated projects for solicited proposals, a reasonable rate of return shall be determined prior to negotiation.</p> <p>Insofar as applicable, the same rules provided for the evaluation of the technical and financial aspects of bid proposals shall be applied in the evaluation of negotiated contracts.</p>

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Table 9.3 continued

Theme	Description
Contract signing	Upon the head of agency/LGU's approval of the recommendation to award to the winning bidder, and within 5 days of the receipt by the winning bidder of the notice from the agency/LGU that all conditions stated in the Notice of Award have been complied, the winning bidder and the head of agency/LGU shall execute and sign the contract for the project.

LGU = local government unit, PPP = public-private partnership.

Source: Government of the Philippines. 2012. *The Philippine Amended BOT Law Republic Act 7718 and Its Revised Implementing Rules and Regulations*. Manila.

9.1.3 PPP Market Maturity

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close	113	117	4
PPP projects currently in preparation	n/a	n/a	14
PPP projects currently in procurement	n/a	n/a	30

A cumulative 117 projects reached financial close by the end of 2017. A majority of these projects were energy projects, and a smaller proportion comprised of transport projects. Four projects reached financial close in 2017—three road projects and one thermal energy project:

- Balintawak Toll barrier,
- Cavite–Laguna Expressway,
- Southwest Integrated Transport System, and
- Bataan Coal-Fired Plant 2.

9.1.4 Financial Facilities

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	33	34	1
PPP projects that received export credit agency/international financing institution financing	19	19	–

	2016 ^a	2017
Availability of nonrecourse/limited recourse hard currency loan	✓	✓
Maximum tenor (year)	15–20 years	15 years
Up-front arrangement fee (bps)	100–300 bps	100–150 bps
Floor rate (reference rate)	LIBOR	LIBOR
Margin rate (bps)	100–500 bps	100–300 bps
Political risk cover premium	n/a	n/a
Availability of nonrecourse/limited recourse local currency loan	✓	✓
Maximum tenor (year)	>10 years	12–15 years
Up-front arrangement fee	100–150 bps	100–150 bps
Floor rate (reference rate)	PDST-R2	PDST-R2
Margin rate	250–400 bps	200–300 bps
Availability of interest rate swaps	✓	✓
Forward duration of interest rate swap (year)	20 years	20 years
Availability of currency swaps	✓	✓
Forward duration of currency rate swap (year)	5–9 years	7–9 years
Project financing through project bond issuance	✓	✓
Percentage of project bonds out of total debt for project financing	<30%	<30%
Availability of project financing from local public sector banks	✓	✓
Max tenor for loan from local public sector banks (year)	7–8 years	7–8 years
Percentage of foreign debt out of total debt for project financing	<30%	<30%
Typical D:E ratio	70:30	70:30
Timeline to financial close	6–12 months	6–12 months
Minimum DSCR covenant levels	1.25x–1.3x	1.25x–1.3x

bps = basis points, D = debt, DSCR = debt–service coverage ratio, E = equity, LIBOR = London interbank offered rate, PDST-R2 = Philippine Dealing System Treasury Reference Rate PM.

Note: PDST-R2 is calculated from the weighted average yields of done transactions or best firm bid rates, as the case may be, for the 12 benchmark tenors as of 4:15 p.m. daily.

^a Sample size = 5 PPP projects

The project financing scenario in the Philippines is dominated by local banks due to their aggressive lending backed by a very liquid debt market. Their strong relationships with local conglomerates, plus the requirement for loans to be in local currency, give the local banks a distinct advantage over foreign loans in terms of pricing. Furthermore, domestic banks do not require any political risk guarantee, unlike the international lenders, and offer relatively terms which are light on covenants.

Table 9.4 lists the most active banks (in the past 24 months) for project finance in the Philippines.

Table 9.4: Active Banks for Project Finance in the Philippines

Name	Total Project Financing (\$ million)	Transactions
Rizal Commercial Banking Corporation	412	2
China Banking Corporation	412	2
Bank of the Philippine Islands	412	2
BNP Paribas	271	2
Mitsubishi UFJ Financial Group	263	4

Source: Infraction Deals (information extracted as at 8 March 2018).

The government has been looking into the Philippine bond market as another alternative source of financing for PPP projects. In 2016, ADB provided support for the issuance of the Philippines' first peso-denominated green project bond for the refinancing of the Tiwi and Makiling-Banahaw (Tiwi-MakBan) geothermal facilities. It is noteworthy that the SEC approved the listing of PPP projects (Philippine Stock Exchange) in November 2016.

In late 2016, the Bangko Sentral ng Pilipinas (Central Bank of the Philippines) announced an end to the temporary single borrowing limit relief which had been available to companies involved in PPP projects. This relief was originally established in 2010 to facilitate lending on PPP projects. Nevertheless, in January 2018, the central bank decided to review the single borrowing limit to provide leeway for infrastructure financing. Bangko Sentral ng Pilipinas deputy governor Diwa Guinigundo was quoted as saying monetary authorities are looking to relax borrower limits anew to accommodate bank lending for big-ticket projects, possibly similar to the special 25% cap for PPP projects.

With regards to infrastructure projects and PPPs, the Philippine Stock Exchange had been working on the rules for the introduction of securities issued by infrastructure project vehicles. In December 2016, the Philippine Stock Exchange released the rules for listing of companies involved in PPP projects. Under the PPP Listing and Disclosure Rules, the applicant company does not have to meet the required minimum 3-year track record and operating history, as long as it complies with the additional listing and disclosure requirements for PPP companies. The applicant must be a corporation awarded a PPP contract with a minimum project cost of

P5 billion and should have completed a phase of the project.⁵ These new rules could help to bridge its sizable infrastructure deficit and allow for more players to compete in the space.⁶

9.2 Roads

9.2.1 Regulatory Framework

9.2.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	40%	40%

9.2.1.2 Government Contracting Agency

Most road projects are implemented by the Department of Public Works and Highways (DPWH). However, the Toll Regulatory Board (TRB) was the implementing agency for the Metro Manila Skyway Stage 3 project.

9.2.1.3 Sector-Specific Regulations

	2016	2017
Does the private partner have a legal right to charge users?	✓	✓

The TRB is the main regulatory body for road sector PPP projects, and the DPWH sets up technical standards.

9.2.1.4 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✗	✗
Performance-based operation and maintenance contract	✗	✗
Engineering procurement and construction contract	✗	✗

⁵ ABS CBN News. 2016. PSE Releases Rules for PPP Listing. 12 December. <https://news.abs-cbn.com/business/12/12/16/pse-releases-rules-for-ppp-listing>.

⁶ Oxford Business Group. 2017. Innovations to Spur Growth in Philippine Capital Markets. In *The Report: The Philippines 2017*.

Although the market views that no standardized PPP contracts are used in the road sector, guidance on PPP contract design is included in the National Government Agency Public Private Partnership Manual (Public-Private Partnership Center 2014).

9.2.2 Institutional Capacity for Implementation

9.2.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The DPWH developed a master plan 2020 and 2030 for high-standard highways and expressways to be developed as PPP. The PPP Center tracks progress of a pipeline of PPP projects in the Philippines, which is updated regularly and publicized on the PPP Center website. PPP pipeline of road projects is listed in Table 9.5.

Table 9.5: PPP Pipeline of Road Projects in the Philippines

No	Project Name	Length (km)	Value (\$ million)
1	NLEX-SLEX Connector Road PPP	8.0	467
2	Plaridel Bypass Toll Road Expansion PPP	24.6	200
3	Central Luzon Link Expressway Phase 2 PPP	35.7	304
4	Cavite-Laguna Expressway PPP	44.6	1,184
5	Laguna Lakeshore Expressway Dike PPP	47.0	2,660
6	Manila Bay Integrated Flood Control, Coastal Defense, and Expressway Project	no data	7,700
7	Camarines Sur Expressway Project	16.0	TBD
8	NLEX East Expressway	91.0	TBD
9	Manila-Taguig Expressway Project	17.8	815
10	Operation, Maintenance, and Improvement of Kennon Road, and Marcos Highway	80.0	45

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Table 9.5 continued

No	Project Name	Length (km)	Value (\$ million)
11	Canlubang–Bay Bypass Road Project	22.1	722
12	Manila–Quezon Expressway	102.3	TBD
13	Delpan–Pasig–Marikina Expressway	26.8	TBD
14	Tarlac–La Union Toll Expressway Extension	54.0	TBD
15	Davao–Digos Expressway	60.0	TBD
16	Davao City Expressway	23.3	481
17	Batangas City–Bauan Toll Road Project	10.0	TBD
18	Quezon–Bicol Expressway	80.0	TBD
19	Davao–Samal Bridge	n/a	120
20	Mindoro Batangas Super (Floating) Bridge	15.0	1,129
21	Mindanao Roads Upgrade	280.0	409
22	Delpan–Pasig–Marikina Expressway	25.0	184

km = kilometer, NLEX = North Luzon Expressway, PPP = public–private partnership, SLEX = South Luzon Expressway, TBD = to be decided.

Note: Eleven projects listed in the pipeline are of unknown status.

Sources: IJGlobal. <http://www.ijglobal.com>; PPP Center. 2018. *Pipeline of Projects*. http://ppp.gov.ph/?page_id=26075; Department of Public Works and Highways. <http://www.dpwh.gov.ph/dpwh/>.

9.2.2.2 Project Preparation

Five projects that were in preparation stage last year (Table 167, project numbers 6, 7, 8, 9, and 10) have now changed status (progressed further or have been delayed) but remain in the project pipeline. Five projects (numbers 2, 5, 6, 7, and 8 in the list), which were not in preparation last year, are now in preparation.

	2016	2017
PPP projects currently in preparation	n/a	8

Currently, eight projects are under various levels of preparation:

- Plaridel Bypass Toll Road Expansion PPP,
- Delpan–Pasig–Marikina Expressway,
- Central Luzon Link Expressway Phase 2 PPP,

- Laguna Lakeshore Expressway Dike PPP,
- Davao City Expressway,
- Batangas City–Bauan Toll Road,
- Davao–Digos Expressway PPP, and
- Quezon–Bicol Expressway.

9.2.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	2	2	–
Unsolicited bids	5	7	2
Competitive bidding process	2	4	2
PPP projects currently in procurement	n/a	n/a	3

9.2.3 Features of Past PPP Projects

9.2.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	11	14	3
PPP projects that reached financial close (\$ million)	2,951	3,696	745

Three projects reached financial close during 2017: Balintawak Toll barrier (currently in operation), Cavite–Laguna Expressway (under construction), and Southwest Integrated Transport System (under preconstruction).

9.2.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	6	6	–
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	55%	43%	n/a

Earlier PPP projects had more foreign sponsor participation. In recent years, foreign sponsor participation has noticeably decreased.

9.2.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	2	2	-
Government guarantees:	-	-	-
Minimum traffic/revenue guarantees	-	-	-
Availability-/performance-based payment basis	-	-	-

9.2.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	11	13	2
Government-paid contracts	-	-	-

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	✓	✓
Advertising	✓	✓

9.2.3.5 Tariffs

The TRB sets the rates of tolls that will be charged on national highways, roads, and bridges. LGUs can set toll fees or charges to any regional public road, bridge, pier, waterway, ferry, or telecommunication system that the LGU has funded and constructed.

For build–operate–transfer projects, contractors may charge and collect reasonable toll fees and charges for the use of the project facility not exceeding those proposed in the bid and incorporated in the contract. These fees and charges are to be approved by LGUs. The LGU is responsible for the adjustment of the fees and charges over time that responds to the macroeconomic variables.⁷

However, evidence was found of an apparent uncertainty in how the regulatory boards (TRB and LGU) approve toll rate increases, which has caused delays to the approval of toll adjustments.⁸

Examples of current toll rates in the Philippines are given in Table 9.6.

Table 9.6: Examples of Current Toll Rates in the Philippines

Road	Toll Type	Class 1: Cars, Jeepneys, Pick-ups, Vans (Philippine pesos)	Class 2: Light Trucks, Tourist and School Buses, Class 1 > 7 feet in Height (Philippine pesos)	Class 3: Heavy and Multi-axled Trucks, Trailers (Philippine pesos)
NAIAX Expressway	Open (peso per trip)	45.0	90.0	134.0
STAR Tollway	Close (peso per km)	1.0–4.0	1.9–2.1	1.24–3.1
SLEX, Skyway, MCX Expressway	Close (peso per km)	7.0–12.6	14.0–25.4	21.0–38.2
NLEX, SCTEX Expressway	Close (peso per km)	2.4–3.8	6.0–8.8	7.16–11.3

km = kilometer, MCX = Muntinlupa Cavite Expressway, NAIAX = Ninoy Aquino International Airport Expressway, NLEX = North Luzon Expressway, SCTEX = Subic–Clark–Tarlac Expressway, SLEX = South Luzon Expressway, STAR = Southern Tagalog Arterial Road.

Note: Toll rates are effective from 2016.

Source: Toll Regulatory Board. Toll Rates. <http://trb.gov.ph>.

9.2.3.6 Risk Allocation

Typical risk allocation arrangements in road PPP contracts are shown in Table 9.7.

⁷ ADB. 2016. *Philippines: Public-Private Partnerships by Local Government Units*. <https://www.adb.org/sites/default/files/publication/213606/philippines-ppp-lgus.pdf>.

⁸ R. Francisco. *Philippine Reforms Spark Regulatory Tussles Over Infrastructure*. <http://www.reuters.com/article/philippines-infrastructure-idUSL3N10A18F20150730>.

Table 9.7: Typical Risk Allocation Arrangements in Road PPP Contracts in the Philippines

Risk	Private	Public	Shared	Comment
Traffic risk	✓			
Collection risk	✓			
Competition risk	✓			
Government payment risk				There have not been road performance paid contracts
Environmental and social risk	✓ (unsolicited)		✓ (solicited)	
Land acquisition risk	✓ (unsolicited)	✓ (solicited)		
Permits			✓	
Geotechnical risk	✓			
Brownfield risk: inventories studies, property boundaries, project scope			✓	
Political risk			✓	
Foreign exchange risk	✓			
Construction risk	✓			

PPP = public–private partnership.

Source: Mott MacDonald research undertaken in the first quarter of 2017.

9.2.4 Local Capabilities

The development and operation of PPP road projects in the Philippines is dominated by few conglomerates. Typical firms are listed below.

- **Metro Pacific Investment Corporation** is one of the largest players in the Philippine PPP road sector. It is one of the largest infrastructure companies in the Philippines with investments in toll roads, rail water utilities, power distribution and generation, and hospitals. Metro Pacific Investment Corporation's subsidiaries operate three toll roads in Luzon and have also won two unsolicited projects under the previous government.⁹
- **San Miguel Corporation** is another big player in the Philippine PPP road sector. The company subsidiaries currently sponsor the South Luzon Expressway; Skyway

⁹ M. Jamwal. 2016. Metro Pacific Moves Forward with Expansion Plans. *Infra-Asia*. <https://www.infra-asia.com/.../metro-pacific-moves-forward-with-expansion-plans.thtml>.

Stage 1, 2, and 3; Southern Tagalog Arterial Road; Tarlac–Pangasinan–La Union Expressway; and Ninoy Aquino International Airport Expressway.¹⁰

- **Ayala Corporation** is the concessionaire for the Daang Hari–South Luzon Expressway Link Road PPP, and typically bids for the road projects.

9.2.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	5	5	–
PPP projects that received export credit agency/international financing institution support	2	2	–

The North Luzon Expressway project received loans from ADB and the International Finance Corporation and was refinanced in 2006 with the Mizuho Corporate Bank acting as the mandated lead arranger. The South Luzon Tollway project, which reached financial close in 2006, also received loans from the International Finance Corporation.

9.2.6 Challenges

The Laguna Lakeshore Expressway Dike PPP project—one of the largest PPP deals administered by the DPWH—was declared a failed bid in March 2016. Failure to procure was due to all three selected bidders deciding not to submit proposals. Reasons stated by the selected bidders included key risks such as road connectivity issues not being resolved, challenging government’s initial cost estimates given the country’s largest and most complex PPP to date. The project is currently undergoing further conceptualization and development.

Challenges of PPP progress in the road sector are provided in Table 9.8.

Table 9.8: Challenges of PPP Progress in the Road Sector in the Philippines

Challenges	Currently Implemented Tackling Measures
Foreign investment and ownership is currently limited to 40% of the venture. This limitation hinders the competition and inhibits Philippine infrastructure developments.	Foreign investment negative list was submitted to the Office of the President for review and was on its final review stage as of October 2017. The current government hopes to address this limitation by lifting the restriction as part of amendments to be made to the 1987 Constitution during the 2016–2022 presidential term.

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¹⁰ San Miguel Corporation. Infrastructure. <https://www.sanmiguel.com.ph/article/infrastructure>.

Table 9.8 *continued*

Challenges	Currently Implemented Tackling Measures
Ambiguous rules or application of toll approval procedures by the national and local regulators.	The issue appears to be recognized by the PPP Center. Some solutions might have to be project-specific. However, a greater clarity of rules and timelines for toll adjustments would be welcomed by the market. In some markets, there is a cutoff period for regulators to make a decision, with a formula applying should no decision be made.
Investors typically perceive high level of government payment risk and tariff adjustment risk.	Local firms that have diversified business may look to attenuate these risks by relying on third-party revenues, such as real estate developments.
Land acquisition delays. Often, the PPP was awarded before right-of-way is procured.	
Frequent delays during the tender process. Lack of adequate time at the outset to prepare bids. Change of the project structure by the government during the tender process. Limited opportunity to negotiate a contract and key risk allocation. Increased cost of bid preparation for the investors due to government often decides to re-tender push away some investors from participating in the bidding.	The PPP Center has set up an interagency group with the National Economic and Development Authority to help evaluate the best way to procure projects on a case-by-case basis. This has led to the emergence of a “hybrid PPP” model where the government has opted to directly fund and procure construction as opposed to adopting the PPP model.

Sources: Mott MacDonald research undertaken in the first quarter of 2017 and updated in the first quarter of 2018; IJGlobal. 2017. *Philippines PPP Center Sets Up Channel with NEDA*. January. <https://ijglobal.com/articles/106620/philippines-ppp-center-sets-up-channel-with-neda>; IJGlobal. 2017. *Philippines Approves Five Transportation Projects*. <https://ijglobal.com/articles/107018/philippines-approves-five-transportation-projects>.

9.3 Railways

9.3.1 Regulatory Framework

9.3.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	40%	40%

9.3.1.2 Government Contracting Agency

Various government agencies and state-owned enterprises (SOEs) could act as GCAs, including the Light Rail Transit Authority, the Department of Transportation (DOTr), and the Philippine National Railways.

9.3.1.3 Sector-Specific Regulations

	2016	2017
Does the private partner have a legal right to charge users?	✓	✓

The government is currently implementing decommissioning of the old magnetic-based ticketing system and replacing the same with contactless-based smart card technology on operational Light Rail Transit (LRT) Lines 1 and 2, and MRT Line 3, with the introduction of a centralized back office that will perform apportionment of revenues to the operators.

9.3.1.4 Sector Regulators

The Land Transportation Franchising and Regulatory Board (which is under the DOTr) sets routes, regulates fares, and oversees licensing requirements for land-based transportation services.

9.3.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	×	×
Performance-based operation and maintenance contract	×	×
Engineering procurement and construction contract	×	×

9.3.2 Institutional Capacity for Implementation

9.3.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The PPP Center tracks progress of a pipeline of PPP projects in the Philippines, which is updated regularly and publicized on the PPP Center website.

PPP pipeline of railways projects is provided in Table 9.9.

Table 9.9: PPP Pipeline of Railways Projects in the Philippines

No	Project Name	Length (km)	Value (\$ million)	Lead Agency
1	Manila Light Rail Transit System Line 2 (LRT-2) Masinag Extension and O&M of all LRT-2	n/a	n/a	DOTr and LRTA
2	Manila Light Rail Transit System Line 6 (LRT-6)	19.0	1,307	DOTr
3	Manila Light Rail Transit System Line 4 (LRT-4)	11.0	908	DOTr
4	East–West Rail Project	9.4	TBD	PNR
5	Mindanao Railway	2,000.0	2,540	Government of the Philippines
6	MRT Line 7	23.0	1,191	DOTr
7	Integrated Transport System Project North Terminal	n/a	TBD	DOTr

n/a = during the time of the study, DOTr = Department of Transportation, km = kilometer, LRTA = Light Rail Transit Authority, O&M = operation and maintenance, PNR = Philippine National Railways, TBD = to be decided.

Sources: IJGlobal. <http://www.ijglobal.com>; PPP Center. 2017. *Pipeline of Projects*. http://ppp.gov.ph/?page_id=26075.

9.3.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	4

Currently, four projects (numbers 1, 2, 3, and 5 in the Table 9.9) are under various stages of preparatory activities.

9.3.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment			
Unsolicited bids	1	1	-
Competitive bidding process	2	2	-
PPP projects currently in procurement	n/a	n/a	3

Automatic Fare Collection System PPP, Philippines Metro Ticket PPP, and Integrated Transport System–South Terminal PPP are currently in procurement.

9.3.3 Features of Past PPP Projects

9.3.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	3	3	-
PPP projects that reached financial close (\$ million)	3,746	3,746	-

To date, three rail projects reached financial close: MRT Line 3 in 2009, and LRT-1 Extension and MRT Line 7 in 2016.

9.3.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	1	1	-
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	33%	33%	n/a

Typically, the role of foreign sponsors is limited to providing equity financing and constitutes a minority stake in the project company.

9.3.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	-	-	-
Government guarantees:	1	1	-
Minimum traffic/revenue guarantees	-	-	-
Availability-/performance-based payment basis	1	1	-

For the MRT Line 3 project, private investors were explicitly guaranteed a 15% return on equity, and the government pays the annual subsidy during the operation of the concession.

9.3.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	2	2	-
Government-paid contracts	-	-	-

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	✓	✓
Advertising	✓	✓

9.3.3.5 Tariffs

Currently, operational MRT Line 3 employs distance-based fare structure, with fares ranging from ₱13 (\$0.25) to ₱28 (\$0.54),¹¹ depending on the number of stations traveled. It is understood that tariffs are not being revised and escalated on a regular basis.

¹¹ Conversion rate as of 1 March 2018: ₱1.00 = \$0.019.

9.3.3.6 Risk Allocation

Typical risk allocation arrangements in railways PPP contracts are provided in Table 9.10.

Table 9.10: Typical Risk Allocation Arrangements in Railways PPP Contracts in the Philippines

Risk	Private	Public	Shared	Comment
Demand risk	✓	✓		For MRT-3 Line, the government assumed the risk; however, preferred risk allocation is private. For LRT-1 extension, the private party bears the risk.
Revenue collection risk	✓			
Tariff risk	✓			
Competition risk	✓			
Government payment risk	✓			
Environmental and social risk			✓	
Land acquisition risk		✓		
Utilities relocation risk			✓	
Interface with other transport/operators			✓	
Permits			✓	
Geotechnical risk	✓			
Regulatory risk			✓	
Political risk			✓	
Foreign exchange risk		✓		For MRT-3 Line, government assumed the risk; however, preferred risk allocation is private.
Early termination risk			✓	

PPP = public-private partnership.

Sources: Mott MacDonald research in the first quarter of 2017; Public-Private Partnership Center. 2016. *Generic Preferred Risks Allocation Matrix (as of 2 August 2016)*. https://ppp.gov.ph/wp-content/uploads/2017/02/GPRAM_2Aug2016.pdf.

9.3.4 Local Capabilities

Similar to the road sector, development of rail PPP projects in the Philippines is dominated by few large conglomerates, including Ayala Corporation, Metro Pacific, and San Miguel Corporation.

9.3.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	2	2	–
PPP projects that received export credit agency/ international financing institution support	–	–	–

Construction of two of the three rail PPP projects has been funded by government-backed development agencies such as the Japan International Cooperation Agency and Czech Export Bank.

9.3.6 Challenges

For the Manila–Makati–Pasay–Paranaque Mass Transit System PPP project, the government appointed advisers in 2013, but eventually the project got mothballed. Similarly, the government intended to tender operation and maintenance of Manila LRT Line 1 and MRT Line 3, but the tender got suspended.

In an effort to speed up the process of building transport infrastructure, the government has signaled a preference to take over the construction phase rather than wait to procure projects out as PPP on a number of build, operate, and transfer concessions.¹²

San Miguel Corporation secured the mandate for LRT-7, which was delayed initially due to land acquisition issues. Then as project prolongation had extended beyond prescribed deadlines, the project had to be taken back through process for government approvals. San Miguel Corporation subsequently has sought to restructure its consortium and financing. Although it is not considered a failure, this indicates difficulties in rail PPP development.

LRT-6 projects did not attract sufficient market interest due to project feasibility challenges. Feasibility and alignment studies are currently being revisited. These projects were under review by implementing agencies as of January 2017.¹³

¹² IJGlobal. 2017. *Philippines PPP Center Sets Up Channel with NEDA*. January. <https://ijglobal.com/articles/106620/philippines-ppp-center-sets-up-channel-with-neda>; IJGlobal. 2017. *Philippines Approves Five Transportation Projects*. June. <https://ijglobal.com/articles/107018/philippines-approves-five-transportation-projects>.

¹³ IJGlobal. 2017. *Philippines PPP's in Procurement under New Due Diligence*. <https://ijglobal.com/articles/107091/philippines-ppps-in-procurement-under-new-due-diligence>.

Challenges of PPP progress in the railway sector are provided in Table 9.11.

Table 9.11: Challenges of PPP Progress in the Railway Sector in the Philippines

Challenges	Currently Implemented Tackling Measures
Foreign investment and ownership is currently limited to 40% of the venture. This limitation hinders competition and inhibits sector development.	Foreign investment negative list was submitted to the Office of the President for review and was on its final review stage as of October 2017. The current government has expressed a hope to address this limitation by lifting the restriction as part of amendments to be made to the 1987 Constitution during the 2016–2022 presidential term.
Frequent delays during the tender process. Lack of adequate time at the outset to prepare bids. Change of the project structure by the government during the tender process. Limited opportunity to negotiate a contract and key risk allocation. Increased cost of bid preparation for the investors due to government often decides to re-tender push away some investors from participating in bidding.	

Source: Mott MacDonald research undertaken in the first quarter of 2017.

9.4 Ports

9.4.1 Regulatory Framework

9.4.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	40%	40%

9.4.1.2 Government Contracting Agency

The state agency Department of Transport and the SOE Philippine Ports Authority are the key GCAs.

9.4.1.3 Sector-Specific Regulations

It is noteworthy that the Philippines has a cabotage policy where Republic Act 9295 (Domestic Shipping Development Act of 2004) restricts foreign-owned vessels to transport goods or passengers. Foreign vessels can apply for a special permit to transport passengers or cargo within the Philippine territorial waters where no domestic vessel is available or suitable to provide the needed shipping service.

9.4.1.4 Sector Regulators

The Philippine Ports Authority, a government-owned and/or -controlled corporation (GOCC), has both development and regulatory powers. It sets port charges and cargo handling rates and awards contracts to private terminal operators. The state-run ports authority was granted financial autonomy through Executive Order No. 159 of 1987.

The Philippine Ports Authority also regulates private ports through issuance of permits to construct and operate ports, approval of increases in cargo handling rates, and collecting shares from port dues (50%). Six independent port authorities, which operate outside the control of the Philippine Ports Authority, can set their own rates for port charges, but normally follow the lead of the state-run ports authority.

The Maritime Industry Authority, attached to the DOTr, was created in 1974. The government agency regulates domestic and overseas shipping, shipbuilding, ship repair, and the maritime workforce. The Maritime Industry Authority is not involved in ship operating activities.

Details of port sector regulatory agencies in the Philippines are shown in Table 9.12.

Table 9.12: Port Sector Regulatory Agencies in the Philippines

Agency	Function
Maritime Industry Authority	<ul style="list-style-type: none"> • Develop and formulate plans, policies, programs, projects, standards, specifications, and guidelines geared toward the promotion and development of the maritime industry, the growth and effective regulation of shipping enterprises, and for the national security objectives of the country; • Establish, prescribe, and regulate routes, zones, and/or areas of operation of particular operators of public water services; • Issue certificates of public convenience for the operation of domestic and overseas water carriers; • Register vessels as well as issue certificates and licenses or document necessary or incident thereto;

continued on next page

Table 9.12 *continued*

Agency	Function
	<ul style="list-style-type: none"> • Undertake the safety regulatory functions pertaining to vessel construction and operation including the determination or manning levels and issuance of certificates of competency to seafarers; • Enforce laws and prescribe and enforce rules and regulations, including penalties for violations thereof, governing water transportation, and the Philippine merchant marine, and deputize the Philippine Coast Guard and other law enforcement agencies to effectively discharge these functions; • Undertake the issuance of license to qualified seafarers and harbor, bay, and river pilots; • Determine, fix, and/or prescribe charges and/or rates pertinent to the operation of public water transport utilities, facilities, and services except in cases where charges or rates are established by international bodies or associations of which the Philippines is a participating member or by bodies or associations recognized by the Philippine government as the proper arbiter of such charges or rates; • Accredited marine surveyors and maritime enterprises engaged in shipbuilding, ship repair, ship breaking, domestic and overseas shipping, ship management; • Issue and register the continuous discharge book of Filipino seafarers; • Establish and prescribe rules and regulations, and standards and procedures for the efficient and effective discharge of the above functions; and • Perform such other functions as may now or hereafter be provided by law.
Philippine Ports Authority	<ul style="list-style-type: none"> • Formulate in coordination with the National Economic and Development Authority a comprehensive and practicable port development for the state, and to program its implementation and to renew and update the same annually in coordination with other national agencies; • Supervise, control, regulate, construct, maintain, operate, and provide such facilities or services as are necessary in the ports vested in, or belonging to, the Philippine Ports Authority; • Prescribe rules and regulation, procedures, and guidelines governing the establishment, construction, maintenance, and operations of all other ports, including private ports in the country; • License, control, regulate, and supervise any construction or structure within any port district; • Provide services (whether on its own, by contract, or otherwise) within the port district and the approaches thereof, including but not limited to berthing, towing, mooring, moving, slipping, or docking any vessel; loading or discharging any vessel; and sorting, weighing, measuring, warehousing, or otherwise handling goods; • Exercise control of or administer any foreshore rights or leases which may be vested in the Philippine Ports Authority from time to time;

continued on next page

Table 9.12 continued

Agency	Function
	<ul style="list-style-type: none"> • Coordinate with the Bureau of Lands or any other government agency or corporation, in the development of any foreshore area; • Control, regulate, and supervise pilotage and the conduct of pilots in any port district; and • Provide or assist in the provision of training programs and training facilities for its staff of port operators and users for the efficient discharge of its functions, duties, and responsibilities.

Sources: Maritime Industry Authority. Annual Report 2007. www.marina.gov.ph/reports/AR2007.pdf; Department of Transportation and Communications and the Philippine Ports Authority. *Davao Sasa Port Modernization Project. Information Memorandum April 2015.* <http://dotr.gov.ph/images/PPP/2015/P17BDavaoSasaPortMP/filepart1.pdf>.

9.4.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

9.4.2 Institutional Capacity for Implementation

9.4.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The Philippines' Investment Priorities Plan, which aligned with the goals, priorities, and strategies of the updated Philippine Development Plan (2011–2016), identified eight preferred investment areas. PPP projects and infrastructure and logistics projects (including ports) are among the preferred investment areas. Port infrastructure and logistics are again proposed for inclusion in the Investment Priorities Plan of 2017. The PPP Center tracks progress of a pipeline of PPP projects in the Philippines, which is updated regularly and publicized on the PPP Center website.

As of February 2018, there was one maritime project in the PPP pipeline. It is understood that plans to develop the Davao Sasa port modernization were cancelled in late 2016, and the Central Spine Roll-on/ Roll-off project has been dormant since 2014.

PPP pipeline of maritime projects is shown in Table 9.13.

Table 9.13: PPP Pipeline of Maritime Projects in the Philippines

No	Project Name	Location	Value (\$ million)
1	San Ramon Newport Project	Zamboanga City	TBC

PPP = public-private partnership, TBC = to be confirmed.

Sources: IJGlobal. <http://www.ijglobal.com>; PPP Center. 2017. *Pipeline of Projects*. http://ppp.gov.ph/?page_id=26075.

9.4.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

9.4.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	6	6	-
Competitive bidding process	5	5	-
PPP projects currently in procurement	n/a	n/a	-

It is understood that plans to develop the Davao Sasa port modernization were cancelled in late 2016.

9.4.3 Features of Past PPP Projects

9.4.3.1 PPP Projects That Reached Financial Close

	1990–2016	1990–2017	In 2017
PPP projects that reached financial close (number)	11	11	-
PPP projects that reached financial close (\$ million)	1,463	1,463	-

Brownfield projects under rehabilitate, operate, and transfer scheme for freight terminals accounted for 40% of past projects.

The Subic Port New Container Terminal 2, a concession management and lease agreement for 25 years, reached financial close in 2011.

9.4.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	2	2	-
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	20%	20%	n/a

9.4.3.3 Government Support

No information available.

9.4.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	11	11	-
Government-paid contracts	-	-	-

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	✓	✓
Advertising	✓	✓

It is understood that for future port PPP projects, the government intends to structure concessions using a landlord model, under which the port authority will retain ownership of the port and retain port dues, and the private operator will receive revenues for cargo handling and other services.

9.4.3.5 Concession Fees

	2016	2017
What are the typical mechanisms for fee paid to the government?		
Lump sum	no data	no data
Royalties	no data	no data
Revenue share	no data	no data
Profit share	✓	✓
Annual lease	✓	✓

9.4.3.6 Tariffs

	2016	2017
Does private sector have the freedom to set the tariff?	×	×

Tariffs for the port sector are set and regulated by the Philippine Ports Authority. Terminal handling charges (THC) are set by the terminal operators with respect to container movement services at a terminal. For container terminals, THCs cover the movement of a container between the ship's hold and the exit-entry gate via the container terminal yard. Table 9.14 gives a general indication of the destination THCs for a full container load as charged by the relevant terminal operator, port authority, and/or shipping line.

Table 9.14: Typical Terminal Handling Charge in the Philippines

Designation	Company	Year	Terminal Handling Charge (\$)	
			Twenty-foot equivalent unit	Forty-foot equivalent unit
Shipping Line	K LINE	2017	133	166
Shipping Line	OOLA	2016	125	155
Terminal operator	MICT	2015	98	137
Terminal operator	Philippine Ports Authority	2013	75	175

K LINE = Kawasaki Kisen Kaisha, Ltd; MICT = Manila International Container Terminal.

Source: Mott MacDonald research undertaken in the first quarter of 2017.

Actual THCs may vary from port to port of each country, as the cost of handling depends on the contractual agreement between terminal operators and the relevant shipping line. Additional wharfage charges of \$10 for twenty-foot equivalent unit and \$16 for forty-foot equivalent unit apply to all foreign containerized cargo at Philippine Ports Authority-owned ports.

9.4.3.7 Labor

	2016	2017
How is the issue of excess and efficiency of labor force typically being resolved?		
The private operator is given the freedom to hire and fire and to set its own terms and conditions of employment	x	x
The pre-PPP workforce is transferred to the private operator. The private operator is allowed to make gradual changes to the terms and conditions of employment, providing these are no worse than before and/or are acceptable to the unions or workers' representatives.	✓	✓
The port authority or the government undertakes a major labor force restructuring in advance of the PPP, and the workforce is transferred to the private operator.	x	x

As per the recent PPP Governing Board (PPGGB) Policy Circular No. 08-2016 on managing government employees affected by PPP projects, affected employees may choose to transfer and be employed by the PPP project company. In this case, the project company has to employ them for at least 6-month probation period, with a subsequent option of permanent position.

9.4.3.8 Risk Allocation

Typical risk allocation arrangements in port PPP contracts are given in Table 9.15.

Table 9.15: Typical Risk Allocation Arrangements in Port PPP Contracts in the Philippines

Risk	Private	Public	Shared	Comment
Demand risk	✓			
Competition risk (exclusivity)	✓			
Tariff risk	✓			
Environmental and social risk			✓	
Land acquisition risk	✓ (unsolicited)	✓ (solicited)	✓ (unsolicited)	

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Table 9.15 *continued*

Risk	Private	Public	Shared	Comment
Permits			✓	
Geotechnical risk	✓			
Foreign exchange risk	✓			
Political risk			✓	

PPP = public-private partnership.

Source: Mott MacDonald research undertaken in the first quarter of 2017.

9.4.4 Local Capabilities

The maritime sector in the Philippines encompasses a wide range of activities. The World Trade Organization's Trade Policy Review of 2013 notes that 169 Philippine-registered ships engaged in international voyages and 7,223 Philippine-registered ships are involved in domestic transport of cargo and passengers. The Philippines is a major supplier of seafarers to international shipping fleets across the world. International ports, such as the Port of Manila, are operated by international port-operating companies.

9.4.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	2	2	-
PPP projects that received export credit agency/international financing institution support	-	-	-

9.4.6 Challenges

Challenges of PPP progress in the port sector are shown in Table 9.16.

Table 9.16: Challenges of PPP Progress in the Port Sector in the Philippines

Challenges	Currently Implemented Tackling Measures
Foreign investment and ownership is currently limited to 40% of the venture. This limitation hinders competition and inhibits sector development.	Foreign investment negative list was submitted to the Office of the President for review and was on its final review stage as of October 2017.
Cabotage policy restriction for foreign vessels.	
Combined regulatory and development function of the Philippine Ports Authority creates conflict of interest.	

Source: Mott MacDonald research undertaken in the first quarter of 2017.

9.5 Airports

9.5.1 Regulatory Framework

9.5.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	40%	40%

9.5.1.2 Government Contracting Agency

Most airports in the Philippines are owned by either the DOTr through executive agencies such as the Manila International Airport Authority or the Civil Aviation Authority of the Philippines. In theory, either entity could be the grantor of a PPP contract. If the airport is owned by an executive body, then precedent suggests that the DOTr and the executive body should be co-grantors.

9.5.1.3 Sector-Specific Regulations

There are several regulations that will have an impact on PPP projects:

- The Association of Southeast Asian Nations (ASEAN) Single Aviation Market came into effect in January 2015. This policy aims to liberalize the air transport market in each ASEAN member state to boost the region's connectivity and competitiveness as well as reduce airfares. The single market allows ASEAN-based carriers to carry passengers and cargo from and to any third country to an ASEAN member state. This requires each state to fully open up their international airports to other ASEAN members and eliminate restrictions on the frequency and maximum capacity of flights. The Philippines has withheld Manila airport, the country's largest, from the ASEAN provisions due to the slot-constrained nature of the airport.
- The Manila and Cebu airports are subject to slot coordination to manage any spare capacity efficiently. Slots are either allocated by an independent slot coordination body based on a number of allocation rules or, in the case of Cebu, by the Mactan–Cebu International Airport Authority. Slots are usually allocated for each summer and winter season.
- The International Civil Aviation Organization publishes a number of regulations that airport operators are required to adopt to ensure safe and secure air transport operations. This includes Annex 14 which sets out the physical requirements for any type of civil airport to receive an operating license from the National Civil Aviation Authority, as well as Annex 17 which deals with various security measures to safeguard the aviation industry against acts of unlawful interference. The DOTr (through the

Office of Transportation Security) and the Civil Aviation Authority of the Philippines are responsible for implementing and monitoring compliance with these regulations.

- In addition, local and national police provide policing to airports.
- Control over any development-related regulations around airports (to ensure that obstacle limitation surfaces are maintained for the safe operation of aircraft from and to the airport) are not strictly enforced.
- Security, customs, quarantine, and immigration-related regulations specify the requirements of functions undertaken by the state or public authorities.

9.5.1.4 Sector Regulators

Details of airport sector regulatory agencies in the Philippines are shown in Table 9.17.

Table 9.17: Airport Sector Regulatory Agencies in the Philippines

Agency	Function
Department of Transport	Provides oversight and strategic direction for air transport and for the airports within its control. Provides avenue to central government funding for its airports.
Civil Aviation Authority of the Philippines	Acts as regulator for compliance with certain International Civil Aviation Organization provisions. Provider of air navigation services. Owner and operator of some airports. Owner, operator, and maintainer of air navigation equipment.
Office of Transportation Security	Provision of security screening staff and regulation of aviation security.
Civil Aeronautics Board	Negotiation of air traffic rights and support of slot allocation processes.

Source: Mott MacDonald research undertaken in the first quarter of 2017.

9.5.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

9.5.2 Institutional Capacity for Implementation

9.5.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The strategy for investment in airports is clear. However, the nature by which such investment will occur is not clear. There is debate over the priorities and solutions for the capacity shortage to serve the greater Manila area.

After cancelling the procurement process for five regional airports in May 2017, the government is seeking to finance the construction phase of five regional airports with overseas development assistance loans.

PPP pipeline of airport projects is shown in Table 9.18.

Table 9.18: PPP Pipeline of Airport Projects in the Philippines

No	Project Name	Value (\$ million)
1	Ninoy Aquino International Airport Modernization Project (unsolicited proposals)	TBD
2	New Manila International Airport Project (unsolicited proposals)	TBD
3	Davao International Airport Concession (unsolicited proposal)	TBD
4	New Bohol (Panglao) International Airport Concession (unsolicited proposals)	TBD
5	Iloilo International Airport Concession (unsolicited proposal)	TBD
6	Bacolod–Silay Airport Concession (unsolicited proposal)	TBD
7	Laguindingan Airport Concession (unsolicited proposal)	TBD

PPP = public–private partnership, TBD = to be decided.

Sources: PPP Center. 2018. *Pipeline of Projects*. http://ppp.gov.ph/?page_id=26075; Mott MacDonald.

9.5.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	1

Clark International Airport is currently under preparation as a hybrid PPP. The Ninoy Aquino International Airport Modernization, which was under preparation as a PPP project in 2016, has not progressed due to change in government policy, and unsolicited proposals are now being considered.

9.5.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	1	1	-
Competitive bidding process	2	2	-
PPP projects currently in procurement	n/a	n/a	1

9.5.3 Features of Past PPP Projects

9.5.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	2	2	-
PPP projects that reached financial close (\$ million)	1076	1076	n/a

Notable example of successful PPP implementation has been the Mactan–Cebu International Airport Passenger Terminal PPP project that was awarded through a solicited bid process to GMR Megawide Cebu Airport Corporation in 2014, and reached financial close in 2015. There were seven bidding consortia. The concession period is 25 years under a build–operate–transfer structure. The project received a global award as “2015 Best PPP Deal” from the IJGlobal, an infrastructure journal, in Singapore.

9.5.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	1	1	-
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	50%	50%	n/a

9.5.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	-	-	-
Government guarantees:	-	-	-
Minimum traffic/revenue guarantees	-	-	-
Availability-/performance-based payment basis	-	-	-

9.5.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	2	2	-
Government-paid contracts	-	-	-
What aeronautical revenue streams are allowed?			
Landing fees		✓	✓
Aircraft parking fees		✓	✓
Boarding bridge fees		✓	✓
Terminal service fees		✓	✓
What nonaeronautical revenue streams are allowed?			
Commercial		✓	✓
Ancillary		✓	✓

It is noteworthy that duty-free retail is a government state-owned enterprise (SOE) with monopoly provision rights. The income from duty-free activities is generally outside the provisions of PPP agreements.

9.5.3.5 Tariffs

The approach with passenger service charge and ancillary charges tariff setting has been to provide a form of regulation with the government maintaining control via the Mactan-Cebu International Airport Authority. Passenger service charge escalation is also set out with the concession agreement.

9.5.3.6 Risk Allocation

Typical risk allocation arrangements in airport PPP contracts are shown in Table 9.19.

Table 9.19: Typical Risk Allocation Arrangements in Airport PPP Contracts in the Philippines

Risk	Private	Public	Shared	Comment
Traffic risk	✓			
Competition risk (exclusivity)			✓	
Environmental and social risk	✓			
Land acquisition risk		✓		
Permits	✓			
Handover risk	✓			
Political risk			✓	
Foreign exchange risk	✓			

PPP = public-private partnership.

Source: Mott MacDonald research undertaken in the first quarter of 2017.

9.5.4 Local Capabilities

The PPP process for airports has recognized that additional skills are needed to supplement the local market and, hence, international airport operators have been sought. The Civil Aviation Authority of the Philippines and the DOTr (through its executive agencies) have skills in the operations and maintenance of airports. A number of major conglomerates in the Philippines have participated in the PPP process for airports with a desire to deploy their wider concession management skills into the airport arena in cooperation with international airport operators.

9.5.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	-	-	-
PPP projects that received export credit agency/international financing institution support	1	1	-

9.5.6 Challenges

Challenges of PPP progress in the airport sector are given in Table 9.20.

Table 9.20: Challenges of PPP Progress in the Airport Sector in the Philippines

Challenges	Currently Implemented Tackling Measures
The complexity of the challenge for providing sufficient airport capacity to the greater Manila region without a defined government policy for prioritizing airport development.	The Department of Transportation is reviewing unsolicited proposals and considering strategic context.
The complexity of the challenge for providing sufficient airport capacity to the greater Manila region without a defined government policy for prioritizing airport development.	The draft 11th foreign investment negative list, which is published by the government and details regulation of the foreign ownership percentage in certain industries, was submitted in October 2017. However, no figures have been confirmed or officially released. The orders are expected to take full effect by 2019. ^a
Current government policy is to move away from implementing standard PPP projects and to incentivize unsolicited proposals for future airport development by the private sector. This has led to the cancellation of two airport PPP projects (NAIA, five regional projects) prepared by the previous administration, and the submission of various unsolicited proposals for new airport develops in the greater Manila region and other parts of the Philippines, which will affect confidence of the market. Furthermore, these have not been prepared or structured by the public sector which may result in commercially unviable development propositions.	

NAIA = Ninoy Aquino International Airport, PPP = public-private partnership.

^a B. De Vera. 2017. Foreign investment curbs seen lifted by 2019. *INQUIRER.net*. 5 October. <http://business.inquirer.net/238001/foreign-investment-curbs-seen-lifted-2019>.

Source: Mott MacDonald research undertaken in the first quarter of 2017.

9.6 Energy

9.6.1 Regulatory Framework

9.6.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects:		
Power generation (traditional sources)	100%	100%
Power generation (renewable energy, except geothermal which can be up to 100% based on regulations)	40%	40%
Power transmission	40%	40%
Power distribution	40%	40%
Oil and gas	40%	40%

9.6.1.2 Government Contracting Agency

The Department of Energy and various agencies and companies are in charge of the transmission and distribution network.

The National Grid Corporation of the Philippines is a privately owned corporation that has been in charge of operating, maintaining, and developing the country's state-owned power grid since 2007.

There is a mix of long-term bilateral contracts (80%) and wholesale electricity spot market contracts (20%). Contracts vary from 5 to 25 years in length. Meralco is the largest offtaker, covering 25% of population. Power distribution outside the Metro Manila area is handled by private distribution utilities and electric cooperatives.

9.6.1.3 Sector-Specific Regulations

The Electric Power Industry Reform Act 2001 is the key legal document for the energy sector.

The wholesale electricity spot market was established in 2006 and is operated by Philippine Electricity Market Corporation.

9.6.1.4 Sector Regulators

Details of energy sector regulatory agencies are shown in Table 9.21.

Table 9.21: Energy Sector Regulatory Agencies in the Philippines

Agency	Function
Department of Energy	Formulates and implements all government policies and programs for energy exploration, development, distribution, and conservation to ensure sustainable, secure, reliable, and accessible energy. It is the government's supervisory arm for all energy sector-related initiatives.
Energy Regulatory Commission	An independent commission comprised of five members, nominated by the President of the Philippines, to regulate all sectors of the electricity market and protect consumer interests. It promulgates the policies created by the Department of Energy and guidelines formulated by the Joint Congressional Power Commission; issues licenses to electricity suppliers and ensures compliance with the power sector laws. It is also responsible for setting the transmission, distribution, and retail fees charged to end users.
National Power Corporation (NPC)	Prior to the deregulation of the power industry by the Electric Power Industry Reform Act in 2001, NPC was the largest electric power company in the Philippines. Most of the NPC's generation assets have been privatized.
National Transmission Corporation (TransCo)	Takes over the transmission function and related assets of the NPC. TransCo is now responsible for linking the power plants, owned by both the NPC and independent power producers, to the distribution utilities and electricity cooperatives which, in turn, provide electricity to end users.
Power Sector Asset and Liabilities Management	Created to privatize and liquidate the NPC's assets and independent power producers' contracts and liabilities. It also assumed the ownership of TransCo along with all its debt obligations and would oversee the transfer of control of its transmission assets through a 25-year concession agreement to private parties. Power Sector Asset and Liabilities Management has a 25-year corporate life, at the end of which its assets as well as liabilities would be transferred to the Philippine government.

Source: Mott MacDonald research undertaken in the first quarter of 2017.

9.6.1.5 Standard Contracts

	2016	2017
What standardized contracts are available and used in the market?		
PPP/concession agreement	x	x
Power purchase agreement	x	x
Capacity take-or-pay contract	x	x
Fuel supply agreement	x	x
Transmission and use of system agreement	x	x
Engineering procurement and construction contract	x	x

9.6.2 Institutional Capacity for Implementation

9.6.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The Philippine Energy Plan 2012–2030 was developed, focusing on the ramped-up development of renewable energy, accelerated indigenous energy resource exploration, diversification of energy supply sources, promotion of energy efficiency, and the full implementation of electricity market reforms. In January 2016, the draft for Power Development Plan 2015–2030 was presented; however, the official plan to be released is still in progress. In 2015, the Department of Energy issued a tender for 21 renewable energy projects PPP.

PPP pipeline of energy projects is listed in Table 9.22.

Table 9.22: PPP Pipeline of Energy Projects in the Philippines

No	Project Name	Value (\$ million)
1	Amacan Geothermal Project (40 MW)	300
2	Acupan–Itogon Geothermal Project (20 MW)	TBD
3	Southern Leyte Geothermal Project (34 MW)	TBD
4	Southern Leyte Geothermal Project (34 MW)	TBD

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Table 9.22 continued

No	Project Name	Value (\$ million)
5	Binongan–Tineg Hydropower Plant (175 MW)	TBD
6	Sinambalan 1 Hydropower Plant (3.1 MW)	TBD
7	Pagbahan 1 Hydropower Plant (12 MW)	TBD
8	Tubig Hydropower Plant (20.2 MW)	TBD
9	Buhid Hydropower Plant (20.2 MW)	TBD
10	Binalbagan 2 Hydropower Plant (3.6 MW)	TBD
11	Bugtong Falls Hydropower Plant (1.8 MW)	TBD
12	Binulug Hydropower Plant (4.5 MW)	TBD
13	Hilabangan 3 Hydropower Plant (3.6 MW)	TBD
14	Ilog Hydropower Plant (21.6 MW)	TBD
15	Binalbagan 1 Hydropower Plant (13 MW)	TBD
16	Cagayan 1N Hydropower Plant (160 MW)	TBD
17	Cateel Hydropower Plant (17.5 MW)	TBD
18	Agus 3 Hydropower Plant (225 MW)	TBD
19	Madongan 1 Hydropower Plant (11 MW)	TBD
20	Madongan 2 Hydropower Plant (10.4 MW)	TBD
21	Solsona Hydropower Plant (5.9 MW)	TBD

MW = megawatt, PPP = public–private partnership, TBD = to be determined.

Sources: IJGlobal. <http://www.ijglobal.com>; PPP Center. 2017. *Pipeline of Projects*. http://ppp.gov.ph/?page_id=26075.

9.6.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

9.6.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	3	3	-

	1990– 2016	1990– 2017	In 2017
Unsolicited bids	30	30	-
Competitive bidding process	8	8	-
License scheme	8	8	-
PPP projects currently in procurement	n/a	n/a	21

9.6.3 Features of Past PPP Projects

9.6.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	79	80	1
PPP projects that reached financial close (\$ million)	30,012	31,127	1,115

The Bataan Coal-Fired Power Plant PPP project reached financial close in 2017.

Past projects featured domination of coal-fired power plants in the thermal generation sector and hydropower plants in the renewable energy generation sector.

9.6.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)			
Renewable energy	14	14	-
Thermal energy	31	31	-
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)			
Renewable energy	42%	42%	-
Thermal energy	70%	69%	-

9.6.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	-	-	n/a
Government guarantees:	12	12	-
Minimum traffic/revenue guarantees	-	-	-
Availability-/performance-based payment basis	76	76	-

9.6.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	1	1	-
Government-paid contracts	77	77	-
		2016	2017
What additional revenue streams are allowed?			
Land use development rights		✓	✓
Advertising		✓	✓

9.6.3.5 Tariffs

Is there a system of feed-in tariffs (FIT)?			✓
Typical feed-in tariff levels	Type	peso/kWh	
	Wind	8.53	
Run-of-river hydropower	Hydro	5.90	
	Biomass	6.63	
	Solar	8.69	

Note: New solar photovoltaic rates have been announced in 2015.

Source: Government of the Philippines, Department of Energy. *Philippine Energy Plan 2012–2030*. <https://www.doe.gov.ph/pep/philippine-energy-plan-2012-2030>.

9.6.3.6 Risk Allocation

Typical risk allocation arrangements in energy PPP contracts are shown in Table 9.23.

Table 9.23: Typical Risk Allocation Arrangements in Energy PPP Contracts in the Philippines

Risk	Private	Public	Shared	Comment
Demand risk		✓		
Revenue collection risk		✓		
Tariff risk			✓	
Government payment risk	✓			
Environmental and social risk			✓	
Land acquisition risk		✓		
Permits			✓	
Handover risk			✓	
Political risk	✓			
Regulatory risk	✓			
Interconnection risk			✓	
Brownfield risk: asset condition	✓			
Grid performance risk		✓		
Hydrology risk			✓	
Exploration and drilling risk			✓	

PPP = public-private partnership.

Source: Mott MacDonald research undertaken in the first quarter of 2017.

9.6.3.7 Local Capabilities

The diversified conglomerates dominating much of business in the Philippines are also key independent power producers as both developers and operators. These include, in terms of attributable capacity sold to the grid as of 2013, the following:¹⁴

- San Miguel Corporation (22%), including the group's unit, SMC Global Power, which sold 620 MW;
- Aboitiz group (20%); and
- Lopez group (18%), mostly from geothermal and natural gas.

¹⁴ Rappler. 2013. Infographic: Top power players in the Philippines. 16 January. <https://www.rappler.com/rich-media/14729-infographic-top-power-players-in-the-philippines>.

As a result of incentives introduced by the government such as feed-in tariffs, a number of smaller producers are becoming interested in renewable energy plants. Because of greater renewables penetration and the spot market, private sector parties are also becoming interested in pumped storage.

These include

- FirstGen;
- Meralco, a government utility venturing into small- and medium-scale power generation;
- Citicore Power Incorporated, a subsidiary of construction contractor Megawide Construction Corporation; and
- San Lorenzo Ruiz, a construction company and developer of the 500-megawatt Wawa pump storage on Luzon Island.

A number of these developers (such as Megawide Construction Corporation/Citicore Power Incorporated and San Lorenzo Ruiz) are primarily construction contractors and would therefore seek to undertake the majority of the construction in-house.

9.6.4 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	25	26	1
PPP projects that received export credit agency/international financing institution support	12	12	–

9.6.5 Challenges

Table 9.24: Challenges of PPP Progress in the Energy Sector in the Philippines

Challenges	Currently Implemented Tackling Measures
Planning of the power system requires improvement as the country's needs are not always addressed because of constraints in the transmission system as well as overcapacity in some areas.	
Prolonged multistakeholder dialogue to address environmental and social acceptability issues.	

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Table 9.24 *continued*

Challenges	Currently Implemented Tackling Measures
Electrification rates in parts of the country are very low and, coupled with low security, are disincentives for private sector development. The electricity grid has thin margins in reserve capacities.	
There is a need to harmonize the procedures in obtaining permits and licenses.	
Difficulty in obtaining funding, as lenders generally require payment guarantees from government offtakers.	

PPP = public-private partnership.

Source: Mott MacDonald research undertaken in the first quarter of 2017.

9.7 Water and Wastewater

9.7.1 Regulatory Framework

9.7.1.1 Foreign Investor Participation Restrictions

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?		
Bulk water supply and treatment	40%	40%
Water distribution	40%	40%
Wastewater treatment	40%	40%
Wastewater collection	40%	40%

9.7.1.2 Government Contracting Agency

Various agencies can act as government contracting agency (GCA), for example, LGUs, water districts, GOCCs, the Metropolitan Waterworks and Sewerage System, and the DPWH.

9.7.1.3 Sector-Specific Regulations

	2016	2017
Can the private sector be given water abstraction rights?	✓	✓
Are there regulations in place on raw water extraction?	✓	✓
Are there regulations in place on the release of treated effluents?	✓	✓

Even though the private sector can obtain water abstraction rights, there are restrictions as to who can apply for a permit. As per the Philippines' Water Code (Presidential Decree 1067), only the following groups may apply for a water permit from the National Water Resources Board (NWRB):

- citizens of the Philippines;
- associations, duly registered cooperatives, or corporations organized under the laws of the Philippines, at least 60% of the capital of which is owned by citizens of the Philippines; or
- government entities and instrumentalities, including GOCCs.

The regulations for raw water extraction are also detailed in the Philippines' Water Code (Presidential Decree 1067). Treated effluent must comply with quality standards prescribed by the Department of Environment and Natural Resources (DENR) before release.

9.7.1.4 Sector Regulators

Details of water sector regulatory agencies in the Philippines are shown in Table 9.25.

Table 9.25: Water Sector Regulatory Agencies in the Philippines

Agency	Function
Philippines Association of Water Districts	<ul style="list-style-type: none"> • Advocates and promotes policies, standards, and programs to ensure effective and sustainable operations of water districts and collaboration among water districts • Develops, implements, and manages relevant programs to improve teamwork among its members, and strengthen partnership with other institutions within and outside the country
Department of Interior and Local Government	<ul style="list-style-type: none"> • Defines and enforces quality and performance standards for the local government unit-operated water system
Department of Public Works and Highway	<ul style="list-style-type: none"> • Develops water resources master plan to address the issues and challenges in the water sector • Provides support for the improvement of local government unit-operated water supply and sanitation systems

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Table 9.25 *continued*

Agency	Function
Department of Environment and Natural Resources	<ul style="list-style-type: none"> Monitors effluent from wastewater treatment plants Regulates monitoring parameters and effluent standards
Department of Health	<ul style="list-style-type: none"> Provides facilities to monitor and regulate the water quality distributed to consumers Enforces the Philippine National Standards for Drinking Water
National Water Resources Board	<ul style="list-style-type: none"> Issues permits for the appropriation and use of water, and settles disputes regarding the use of water Reviews and approves water supply tariffs charged by private operators and service providers Issues permits, Certificate of Public Convenience, and Certificate of Public Convenience and Necessity to private water operators to provide public services
Local Water Utilities Administration	<ul style="list-style-type: none"> Allocates funds to water districts Regulates water districts in terms of tariff setting and establishing and monitoring key performance indicators and business efficiency measures Provides institutional development assistance in the form of advisory and managerial services
Metropolitan Waterworks and Sewerage System	<ul style="list-style-type: none"> Monitors and enforces concession agreements within Metro Manila (Manila Water and Maynilad Water Services)

Source: Mott MacDonald research undertaken in the first quarter of 2017.

The Local Government Code also allows self-regulation by the LGUs. As shown in Table 9.25, many agencies in the Philippines have a role in the water sector, with no lead agency taking overall responsibility. Several congressional bills have been issued in efforts to strengthen the regulatory framework of the water sector by establishing an independent regulatory agency.

9.7.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

9.7.2 Institutional Capacity for Implementation

9.7.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

Sector strategies developed include the Philippine Water Supply Sector Roadmap for the water supply sector, and the Philippine Sustainable Sanitation Roadmap and Plan for the sanitation sector. The Philippine Water Supply Sector Roadmap, published in 2010, outlines the steps and investments required to achieve the government targets for water supply by 2025. The Philippine Sustainable Sanitation Roadmap and Plan, published in 2010, includes several sustainable sanitation programs until 2028.

Although significant investments are still required to achieve the targets set in the sector strategy documents, any PPP water project does not appear in the foreseeable future. Two projects listed in the PPP Center pipeline are already in the procurement stage, while another three projects listed on the DPWH website appear to be very conceptual ideas.

PPP pipeline of water projects are shown in Table 9.26.

Table 9.26: PPP Pipeline of Water Projects in the Philippines

No	Project Name	Location	Capacity (m ³ /day)	Value (\$ million)
1	New Centennial Water Source–Kaliwa Dam Project	Calabarzon	600,000 (water supply); 2,400,000 (water conveyance)	416
2	Baggao Water Supply Project	Cagayan Valley	Initially serve 24 <i>barangays</i> ^a	1.69
3	Cebu City Bulk Water Supply	Cebu City	TBD	TBD
4	Tagbilaran City Bulk Water Supply	Bohol	TBD	TBD
5	Puerto Princesa City Bulk Water Supply	Palawan	TBD	TBD

m³/day = cubic meter per day, PPP = public–private partnership, TBD = to be decided.

Note: Four projects listed in the pipeline are of unknown status.

^a Smallest administrative division in the Philippines.

Sources: PPP Center. 2018. *Pipeline of Projects*. http://ppp.gov.ph/?page_id=26075; Department of Public Works and Highways. <http://www.dpwh.gov.ph/dpwh/>; Metropolitan Waterworks and Sewerage System. <http://mwss.gov.ph/>.

9.7.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

9.7.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	
Unsolicited bids	5	5	-
Competitive bidding process	5	5	-
PPP projects currently in procurement	n/a	n/a	1

9.7.3 Features of Past PPP Projects

9.7.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	6	6	-
PPP projects that reached financial close (\$ million)	4,227	4,227	n/a

Five projects have been brownfield water utility concessions, while the recent Bulacan bulk water supply is a greenfield project.

9.7.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	3	3	-
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	50%	50%	n/a

9.7.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	-	-	-
Government guarantees:	-	-	-
Minimum traffic/revenue guarantees	-	-	-
Availability-/performance-based payment basis	1	1	-

Data regarding water PPP projects that received government support have not been available. The Bulacan bulk water supply PPP project is done on availability-based payment basis under a water purchase agreement.

9.7.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	5	5	-
Government-paid contracts	1	1	-

9.7.3.5 Tariffs

The tariff structure varies widely across the Philippines. The tariff structure is similar in water districts and Metro Manila, with an average tariff for the first 10 cubic meters and increasing tariffs for additional consumption, as shown in Table 9.27 and Table 9.28. For LGU-operated systems, the tariff levels and structures vary widely because most connections are not metered and offer different levels of service. The NWRB has issued a document providing basic guidelines on tariff setting to improve cost-recovery and regulation.

Relevant regulatory authorities must approve tariff levels and consider a range of factors. The Metropolitan Waterworks and Sewerage System is responsible for regulating tariffs within Metro Manila, the Local Water Utilities Administration is responsible for regulating tariffs for water districts, and the NWRB is responsible for regulating tariffs for private operators and other service providers.

For the concession agreements with Manila Water, there are three tariff adjustment mechanisms:

- inflation adjustment—annual adjustment based on inflation;
- extraordinary price adjustment—compensation for extraordinary events (change in law, government regulation, among others); and
- rate rebasing—every 5 years based on historic and future cash flows.

Table 9.27: Average Water Tariff in Water Districts in the Philippines, 2015

Volume (m ³)	Cost
Up to 10	\$3.93/connection
11–20	\$0.44/m ³
21–30	\$0.48/m ³
31–40	\$0.54/m ³
41–50	\$0.60/m ³
51 and above	\$0.61/m ³

m³ = cubic meter.

Note: Based on 517 water districts and applies only for a 0.5-inch domestic connection. Exchange rate: \$1.00 = ₱49.78.

Source: IBNET. 2018. *IBNET Database*. <https://database.ib-net.org/DefaultNew.aspx>.

No further updates to these values have been made available.

Table 9.28: Current Domestic Water Tariff in Metro Manila, 2016

Volume (m ³)	Manila Water	Maynilad
Up to 10	\$1.95/connection	\$2.90/connection
10–20	\$0.24/m ³	\$0.35/m ³
20–40	\$0.45/m ³	\$0.67/m ³
40–60	\$0.59/m ³	\$0.88/m ³
60–80	\$0.69/m ³	\$1.03/m ³
80–100	\$0.76/m ³	\$1.08/m ³

m³ = cubic meter.

Note: Tariffs exclude surcharges such as foreign currency differential adjustment, environmental charge, and sewerage connection surcharge (if connected). Exchange rate: \$1.00 = ₱49.78.

Sources: Manila Water Company; Maynilad Water Services. http://www.mayniladwater.com.ph/uploaded/New_Tariff_Table.pdf.

9.7.3.6 Risk Allocation

The typical risk allocation arrangements in water PPP contracts are provided in Table 9.29.

Table 9.29: Typical Risk Allocation Arrangements in Water PPP Contracts in the Philippines

Risk	Private	Public	Shared	Comment
Demand risk	✓ Concession	✓ Bulk water supply		
Revenue collection risk	✓ Concession	✓ Bulk water supply		
Tariff risk			✓	
Government payment risk	✓			Government guarantees are possible.
Environmental and social risk			✓	Public, for environmental liabilities existing prior to solicited project (e.g., contaminated site). Private, if environmental liabilities created during operation (e.g., overabstraction of water)
Land acquisition risk	✓	✓		Public, if solicited. Private, if unsolicited.
Interface risk		✓		
Handover risk	✓			
Political risk			✓	Public, if change is discriminatory against the project. Private, for general changes in law or policy
Foreign exchange risk	✓		✓	Generic Preferred Risk Allocation Matrix—private National Economic and Development Authority's structuring PPP—shared (public to assume portion of risk by allowing the total or partial indexing of bulk water rate to exchange rate, and private to assume the remaining risk).

PPP = public–private partnership.

Sources: Mott MacDonald; Investment Coordination Committee. 2014. *Generic Preferred Risk Allocation Matrix (GPRAM)*, updated 22 December 2014, agreed to be adopted by the Investment Coordination Committee–Cabinet Committee. <https://ppp.gov.ph/wp-content/uploads/2015/04/Generic-Preferred-Risk-Allocation-Matrix.pdf>; National Economy and Development Authority. 2009. *Structuring Public-Private Partnerships (PPPs)*. <http://www.neda.gov.ph/wp-content/uploads/2014/01/Structuring-Public-Private-Partnerships-PPPs-Handbook.pdf>.

9.7.4 Nonrevenue Water and Infiltration

Nonrevenue water is defined as water that has been produced and is “lost” before it reaches the user.

Nonrevenue water (%)	42.59
Nonrevenue water (m³/km/day)	194.58
Infiltration	no data

m³/km/day = cubic meter per kilometer per day.

Sources: IBNET. 2009 ; IBNET. 2018. *IBNET Database*. <https://database.ib-net.org/DefaultNew.aspx>.

9.7.5 Local Capabilities

There is strong presence of local utility operators (such as Manila Water, Maynilad Water Services, and Balibago Waterworks) in the Philippines. This is the result of foreign utility ownership being restricted to 40% in the Philippines, as per the Philippines’ Water Code (Presidential Decree 1067).

For locally funded water projects, both foreign consultants and contractors are also legally limited to 40% of the value of the project, leading to the establishment of consortia with local firms.

9.7.6 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	-	-	-
PPP projects that received export credit agency/international financing institution support	3	3	-

9.7.7 Challenges

Challenges of PPP progress in the water sector are presented in Table 9.30.

Table 9.30: Challenges of PPP Progress in the Water Sector in the Philippines

Challenges	Currently Implemented Tackling Measures
Foreign investment and ownership is currently limited to 40% of the venture. This limitation hinders competition and inhibits sector development.	Foreign investment negative list was submitted to the Office of the President for review and was on its final review stage as of October 2017.
Lack of technical and financial resources for LGUs undertaking PPP projects; lack of guidelines for LGUs to form joint ventures with the private sectors for PPP projects.	The PPP Center and the World Bank Water and Sanitation Program have launched guidelines for LGU water districts.
Tariffs are too low to recover costs, especially in LGUs.	
Fragmented institutional framework and multiple regulatory agencies	
Environmental and social studies expenses for water project investment are not recoverable through the rate rebasing mechanism under the concession agreements, which also hinders water investment.	

LGU = local government unit, PPP = public-private partnership.

Source: Mott MacDonald research undertaken in the first quarter of 2017.

9.8 Social Infrastructure

9.8.1 Regulatory Framework

9.8.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Healthcare facilities	40%	40%
Healthcare services provision	40%	40%
Education facilities	40%	40%
Education services provision	0%	0%

9.8.1.2 Government Contracting Agency

Various departments, bureaus, offices, commissions, authorities, or agencies of the national government, including GOCCs, government financial institutions, and state universities and colleges, and LGUs, are authorized to enter into PPP contracts.

The following departments are currently engaged in implementing one or more projects in the social infrastructure PPP pipeline:

- Department of Health (healthcare),
- Department of Education (education),
- Bureau of Corrections (justice),
- Department of Justice (justice),
- Department of Tourism (recreation and culture), and
- Intramuros Administration (recreation and culture).

9.8.1.3 Sector-Specific Regulations

	2016	2017
Can the private sector be given rights to provide education services?	✓	✓
Can the private sector be given rights to provide healthcare services?	✓	✓

The private sector in the Philippines is permitted to provide education services to the public. The government contracts with private secondary schools to enroll students in areas where there is a shortage of public school places.

Private healthcare provides a large share of the healthcare services in the Philippines.

9.8.1.4 Sector Regulators

Table 9.31: Sector Regulators in the Philippines

Agency	Function
Department of Health	Provides national policy direction and develops national plans, technical standards, and guidelines on health. ^a
Local government units	Autonomy and responsibility for local health services with guidance from the Department of Health through the centers for health development (Local Government Code of 1991).

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Table 9.31 *continued*

Agency	Function
Department of Education Central Office	Policy making, planning, standards setting, regulation, and quality assurance at the national level. Responsible for developing and implementing national programs.
Department of Education Regional Office	Policy making, planning, standards setting, regulation, and quality assurance at the regional level. Approves establishment of schools and learning centers.

Note:

^a Asia Pacific Observatory on Health Systems and Policies, the Philippines health system review.

9.8.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

9.8.2 Institutional Capacity for Implementation

9.8.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

Agencies and LGUs implementing the projects are tasked to prepare the infrastructure delivery programs and identify priority projects, which should be consistent with the Philippine Development Plan and the Provincial Development and Physical Framework Plan.

The Public Investment Program and the Comprehensive and Integrated Infrastructure Program are considered to constitute the list of national priority projects. The provincial development investment programs and/or local development investment programs constitute the list of local priority projects. It is noted that there is an expressed intention to periodically update the Public Investment Program, Comprehensive and Integrated Infrastructure Program, and Provincial Development Investment Program, and/or Local Development Investment Program.

The PPP Center tracks progress of a pipeline of PPP projects in the Philippines, which is updated regularly and publicized on the PPP Center website.

PPP pipeline of social infrastructure projects is listed in Table 9.32.

Table 9.32: PPP Pipeline of Social Infrastructure Projects in the Philippines

No	Project Name	Implementing Agency	Value (\$ million)
1	New Nayong Pilipino at Entertainment City	Department of Tourism and Nayong Pilipino Foundation	29.5
2	Fort Magsaysay Regional Prison Facility	Bureau of Corrections and Department of Justice	1,016
3	Rehabilitation of the National Center for Mental Health	Department of Health	TBD
4	Duty Free Retail Development Project	Department of Finance	TBD
5	Judiciary Infrastructure Development PPP	Supreme Court	TBD
6	Manila Heritage and Urban Renewal Project	Department of Finance	TBD
7	Tri-Medical Complex PPP	Department of Health	TBD
8	Tanauan City Public Market Redevelopment Project	City Government of Tanauan	7.68
9	One DTI Building Complex Project	DTI and NDC	TBD

DTI = Department of Trade and Industry, NDC = National Development Company, PPP = public-private partnership, TBD = to be decided.

Note: Six projects listed in the pipeline are of unknown status.

Sources: IJGlobal. <http://www.ijglobal.com>; PPP Center. 2018. *Pipeline of Projects*. http://ppp.gov.ph/?page_id=26075.

9.8.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	2

9.8.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	-	-	-
Competitive bidding process	1	1	-
PPP projects currently in procurement	n/a	n/a	1

9.8.3 Features of Past PPP Projects

9.8.3.1 PPP Projects That Reached Financial Close

	2016	2017
PPP projects that reached financial close (number)		
Healthcare	-	-
Education	1	1
PPP projects that reached financial close (\$ million)		
Healthcare	-	-
Education	372	372

The school infrastructure project that has reached financial close involved the design, financing, and construction of over 20,000 classrooms, including furniture and fixtures, in various sites in over seven identified regions across the country.

9.8.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	-	-	-
PPP projects with foreign sponsor participation (as a share to the total number of social infrastructure PPP projects)	n/a	n/a	n/a

9.8.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	-	-	-
Government guarantees	-	-	-
Availability-/performance-based payment basis	1	1	-

9.8.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	-	-	-
Government-paid contracts	-	-	-

9.8.3.5 Tariffs

Information not available.

9.8.3.6 Risk Allocation

Information not available.

9.8.4 Local Capabilities

Megawide Construction Corporation is a major Philippine company that successfully tendered for social infrastructure PPP projects.

9.8.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	1	1	-
PPP projects that received export accredit agency/ international financing institution support	-	-	-

Standard Chartered Bank acted as the foreign lending agency that provided debt for the School Infrastructure Project Phase I PPP project.

9.8.6 Challenges

The concession for the Philippine Orthopedic Center modernization project was terminated by the concessionaire (Megawide World Citi Consortium Inc.) about 1 year after award as the implementing agency, the Department of Health, did not manage to grant the certificate of possession for the project site.

Intention to tender the Bulacan Medical Center Dialysis Unit Expansion PPP project was announced in 2015; however, no progress has been seen since then.

Table 9.33: Challenges of PPP Progress in the Social Infrastructure Sector in the Philippines

Challenges	Currently implemented tackling measures
Foreign investment and ownership in healthcare and education facilities is currently limited to 40% of the venture, according to the foreign investment negative list. This limitation is viewed to be a restriction of foreign investment and inhibits Philippine infrastructure developments.	Foreign investment negative list was submitted to the Office of the President for review and was on its final review stage as of October 2017.
Untested market.	

PPP = public-private partnership.

Source: Mott MacDonald.

9.9 Other Sectors

Potential PPP projects for sectors not covered in the preceding sections are presented below.

PPP pipeline of projects from other sectors is given in Table 9.34.

Table 9.34: PPP Pipeline of Projects from Other Sectors in the Philippines

No.	Project Name	Location	Value (\$ million)
1	Cebu City Solid Waste Management PPP	Cebu	To be decided

PPP = public-private partnership.

Source: Infradeals. Infradeals Database. <https://www.infra-deals.com> (subscription only).

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10. SRI LANKA

Sri Lanka does not have a specialized legal framework on public–private partnerships (PPPs).¹ The first formal PPP projects were implemented in Sri Lanka subsequent to the year 1995 along with the establishment of the Bureau of Infrastructure Investment (BII) under the Board of Investment of Sri Lanka (BOI) with the intent of facilitating infrastructure projects through private investment. PPP projects in Sri Lanka have been implemented on the basis of guidelines issued in 1998 by the Ministry of Finance: the Guidelines on Government Tender Procedure—Part II on Private Sector Infrastructure Projects (build–operate–own [BOO]/build–operate–transfer[BOT]/build–own–operate–transfer [BOOT] Projects), and of the general public procurement manual and guidelines.

Some complements to the PPP guidelines have been provided in 2011 and 2016 through supplements on unsolicited proposals and the introduction of a Swiss challenge process to encourage private sector initiative without losing the benefits of tender processes.

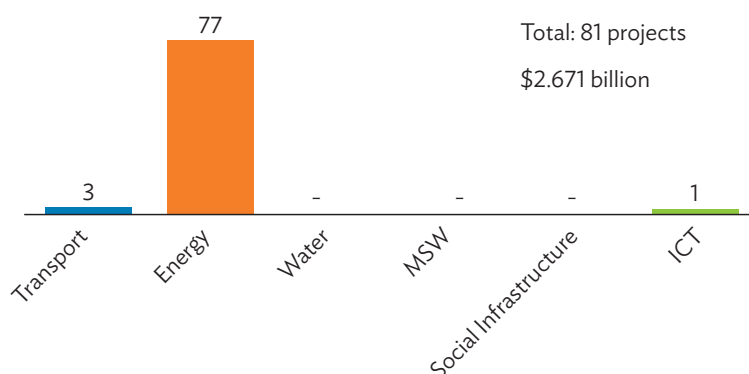
The BII, which played a pivotal role in the facilitation and structuring of the initial PPP projects, has since ceased to exist. With the support of the World Bank, a new PPP framework is currently in preparation, initiated by the creation of a new PPP unit, the National Agency for Public–Private Partnerships (NAPPP), in July 2017. This agency was created as an independent institution designed to select and implement PPP projects, and to provide guidance to the line ministries and agencies in respect of PPPs. The NAPPP is in the process of initiating significant reform to the PPP regulations in Sri Lanka at the time of writing through the introduction of an improved guideline governing PPPs, replacing and superseding the Guidelines on Government Tender Procedure Part II on Private Infrastructure Projects—1998.

Since 1990, there have been 81 projects that reached financial close. Sri Lanka encountered some significant successes while procuring PPPs in the following areas:

- **Energy.** A total of 77 projects reached financial close, representing a total investment amount of \$1,737 million, equally shared between thermal generation and renewables.
- **Ports.** Two major ports PPP projects were successfully procured in 1999 and 2011, representing a total investment amount of \$740 million, to develop and operate the Port of Colombo. A 99-year lease contract was awarded in 2017 for the operation of the Hambantota Port.
- **Information and communication technology.** One project, representing a \$194 million investment, has been implemented.

¹ The *PPP Monitor* is envisaged to be a dynamic product and comments for improving data quality are welcome and can be incorporated in future editions. It should also be noted that the report is using standardized definitions which may not match a particular developing member country's definitions. For the meaning of each indicator, please refer to the Appendix.

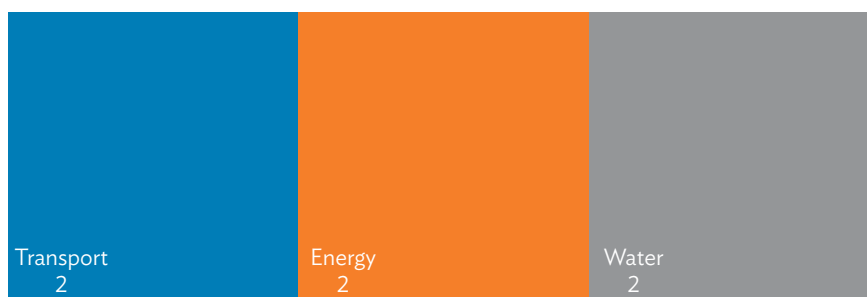
Figure 10.1: PPP Projects in Sri Lanka that Have Reached Financial Close, 1990–2017



ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Sources: IJGlobal. IJGlobal Project Finance and Infrastructure Journal. <http://www.ijglobal.com>; World Bank Group. 2017. World Bank Private Participation in Infrastructure (PPI) Database. <http://ppi.worldbank.org/> (accessed 15 January 2018).

Figure 10.2: PPP Projects in Sri Lanka Currently in Procurement, 2017



Source: Mott MacDonald.

However, infrastructure projects have mainly been financed on public funds these past few years, which is incompatible with the width of the Sri Lankan infrastructure gap and the current availability of public funding. There is currently a huge need for infrastructure development or maintenance that could be covered through PPP procurement, in areas such as roads, water, and waste management.

Despite the absence of a centralized pipeline of PPP projects, several PPP projects are currently in preparation, especially in the ports and water sectors. The Ministry of Megapolis and Western Development, which is in charge of implementing various projects in the western region across several sectors (e.g., transport, water, energy), has identified a pipeline of projects, some of which are being considered as potential PPP projects. The new PPP agency is expected to be in charge of defining a prioritized and transversal PPP pipeline.

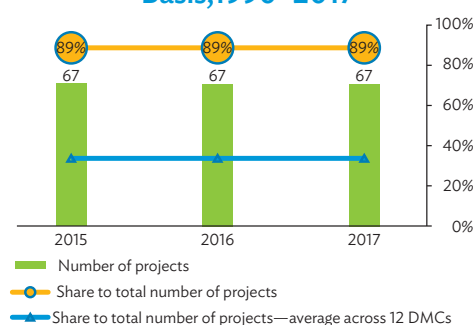
Figure 10.3: Availability of PPP Pipelines in Sri Lanka by Sector

Transport	Energy	Water and wastewater
Municipal solid waste	ICT	Social infrastructure
	The pipeline is developed with more than five projects	
	Less than five projects	
	No definitive plans for PPP projects	

ICT = information and communication technology, PPP = public-private partnership.

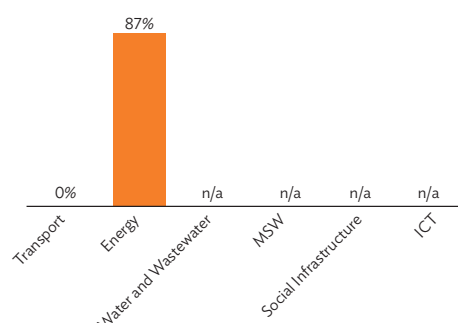
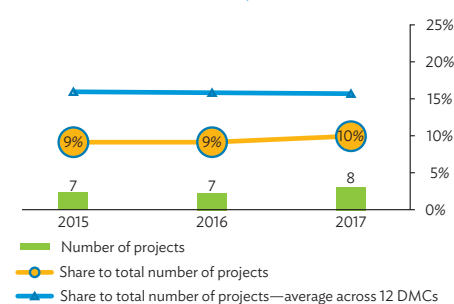
Note: The projects included are published on the official sources.

Source: Mott MacDonald.

Figure 10.4: PPP Projects in Sri Lanka on Availability/Performance Payment Basis, 1990–2017

DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Figure 10.5: Share of PPP in Sri Lanka Projects on Availability/Performance Payment Basis by Sector, 1990–2017**Figure 10.6: Institutional PPP Projects in Sri Lanka, 1990–2017**

DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

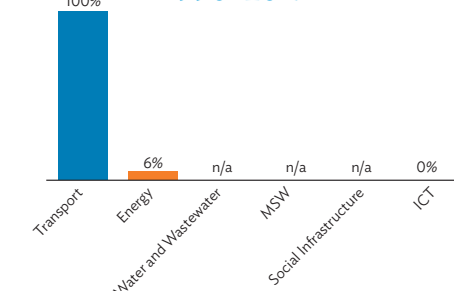
Figure 10.7: Share of Institutional in Sri Lanka PPP Projects by Sector, 1990–2017

Figure 10.8: PPP Projects in Sri Lanka with Export Credit Agency/International Financing Institution Finance Support, 1990–2017

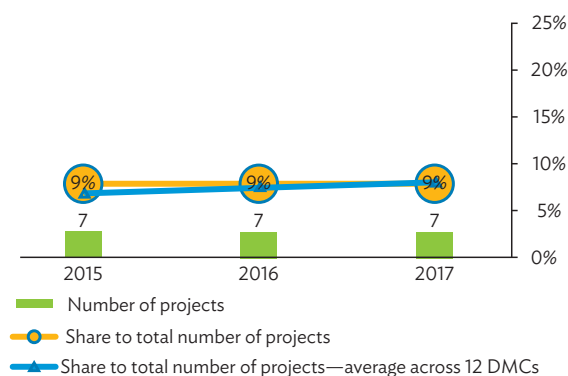
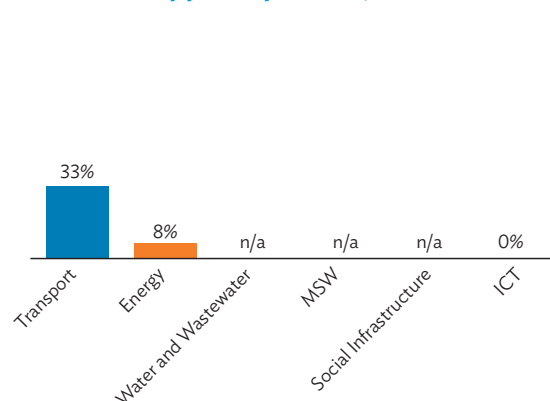


Figure 10.9: Share of PPP Projects in Sri Lanka with Export Credit Agency/International Financing Institution Finance Support by Sector, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

PPP guidelines are silent on institutional PPPs and in the PPP government support modalities. However, eight PPP projects involving public bodies such as the Sri Lanka Ports Authority (SLPA) in the port sector have been registered. In the energy sector, 25 PPP projects based on power purchase agreements associated with payments guarantees have also been implemented, and a total of 67 projects were based on power purchase agreements.

The share of PPP projects with foreign investor participation in Sri Lanka is 35% (28 projects). In Sri Lanka, foreign investment is subject to the approval of the BOI. In most sectors, 100% foreign ownership is allowed. In some sectors (e.g., mass communication, education, mining and primary processing of nonrenewable natural resources), private equity is restricted to 40% of the shares of the investing company. However, the BOI can grant exemptions.

According to the World Bank Group's Private Participation in Infrastructure Database, three PPP projects (4% of the PPP projects) reached financial close through foreign lending. However, information concerning lenders are often unavailable in the database.

A total of 7 out of the 78 projects benefited from export credit agency/international finance institution financing.

While there is appetite for PPPs by domestic investors, there are indications of some significant liquidity constraints in the domestic market in terms of debt amounts and tenors available. One of the main reasons for the liquidity constraint has been the crowding out effect of high levels of public borrowing.

Key Developments from 2016

There have been no particular changes of significance from 2016 in the PPP environment in Sri Lanka in terms of legislative and regulatory impact. However, the establishment of the NAPPP has resulted in the initiation of significant measures toward the revision of the institutional framework and laws governing PPPs.

10.1 Country Profile

10.1.1 Regulatory Framework

10.1.1.1 PPP Law

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

	1990–2016	1990–2017	In 2017
Number of PPP projects that reached financial close under the latest PPP law ^a	72	75	3

Note:

^a Of the 81 projects, 75 projects identified in the databases were financially closed after the issuance of Guidelines on Government Tender Procedure—Part II on Private Sector Infrastructure Projects (BOO/BOT/BOOT Projects) in 1998.

Sri Lanka has not approved any PPP law yet. However, the Guidelines on Government Tender Procedure—Part II on Private Sector Infrastructure Projects (BOO/BOT/BOOT Projects), in its revised edition of January 1998, constitute a broad frame for the implementation of PPP.

The Guidelines on Government Tender Procedure—Part II on Private Sector Infrastructure Projects (BOO/BOT/BOOT Projects) have eight chapters:

- Chapter XIV gives preliminary elements on the scope of the guidelines, the role of the main actors, and some general recommendations for BOO/BOT/BOOT projects management;
- Chapter XV broadly covers procedures for processing of proposals, including unsolicited proposals management;
- Chapter XVI deals with the procedures for issuing request for proposals and assisting bidders;
- Chapter XVII covers the preliminary evaluation of proposals;
- Chapter XVIII lists the evaluation criteria of the different proposals;

- Chapter XIX covers the final report of the project committee;
- Chapter XX describes the negotiations and the award of contract; and
- Chapter XXI covers the different steps of the project finalization (solicited and unsolicited bids).

10.1.1.2 PPP Types

	2016	2017
Number of PPP types defined in the PPP regulations	4	4

The Guidelines on Government Tender Procedure—Part II on Private Sector Infrastructure Projects (BOO/BOT/BOOT Projects) explicitly refers in its section 225 to BOO, BOT, BOOT, and other variants involving private investors that would build, own, and operate an asset and then transfer or lease it to the public sector after a concession period.

However, the guidelines are common to these different types of PPP contracts.

10.1.1.3 Eligible Sectors

	2016	2017		2016	2017
Transport			Energy		
Roads	✓	✓	Power generation	✓	✓
Railways	✓	✓	Power transmission ^a	✗	✗
Ports	✓	✓	Power distribution	✓	✓
Airports	✓	✓	Oil and gas	✓	✓
Water and wastewater	✓	✓	Information and communication technology	✓	✓
Municipal solid waste	✓	✓	Social infrastructure	✓	✓

Note:

^a Statutorily, the Ceylon Electricity Board (CEB) is the only transmission licensee, pursuant to the Electricity Act.

The Guidelines on Government Tender Procedure—Part II on Private Sector Infrastructure Projects (BOO/BOT/BOOT Projects) state that the non-exhaustive eligible sectors for BOO, BOT, or other variants of PPP, include

- power plants;
- highways;
- ports;
- airports;

- telecommunications;
- railways;
- transport systems;
- industrial parks;
- solid waste management;
- water supply and drainage;
- warehouses, housing, markets, etc.;
- land reclamation; and
- other economic infrastructure.

10.1.1.4 Other Applicable Restrictions

	2016	2017
Project funding structure	none	none
Project capital investment size	none	none

The guidelines are silent on these matters.

10.1.1.5 Unsolicited Bids

	2016	2017
Acceptance of unsolicited proposals	✓	✓
Eligibility of the project proponent to have:		
Competitive advantage at bid evaluation	✗	✗
Swiss challenge	✗	✓
Compensation of the project development cost	✗	✓
Government support for land acquisition and resettlement cost	✗	✗
Government support in the form of viability gap fund and guarantees	✗	✗

According to section 237 of the Guidelines on Government Tender Procedure—Part II on Private Sector Infrastructure Projects (BOO/BOT/BOOT Projects), the general recommendation toward unsolicited proposals is to launch a request for proposals, based on a project inspired by the unsolicited proposal, following the standard provisions of the guidelines.

To assess the economic viability of the project the involved public authority should first check that the unsolicited proposal contains all the information required by the guidelines for standard proposals.

The party that designed the unsolicited proposal should be given a chance to improve its proposal, adapting it to the needs and objectives of the public authority in charge.

However, the guidelines state that “when owing to urgent and exceptional circumstances,” it is possible to derogate from this procedure provided that a specific approval from Sri Lanka’s cabinet is obtained.

In 2011, section 237 of the Guidelines on Government Tender Procedure—Part II on Private Sector Infrastructure Projects (BOO/BOT/BOOT Projects) was modified by supplement 23.

This supplement gave further details on the situations in which the acceptance of unsolicited proposals (without following the standard competitive procedures) should be considered.

A Standing Cabinet Appointed Review Committee was appointed to make assessments of unsolicited proposals and advise relevant line ministries or government agencies and the cabinet before decision making.

If the unsolicited proposal was considered by the relevant ministry or public agency to be “exceptionally beneficial to the country in terms of funding,” aligned with the public investment plan, issued by a renowned investor, and the know-how is otherwise scarcely available in the investor’s field, then it could be submitted to the committee for assessment.

The committee assessment, whose content and criteria were described in supplement 23, was submitted to the Cabinet of Ministers for final decision.

At the end of 2016, supplement 23 was replaced by supplement 30 entitled, Reference 237–Dealing with Unsolicited Project Proposals, Introduction to “Swiss Challenge” Procedure, the objective being encouraging private sector initiatives without renouncing the advantages in terms of transparency and efficiency of tender processes.

Supplement 30 recommends the implementation of a Swiss Challenge process when a ministry or a public agency receives an unsolicited proposal that is considered relevant, i.e., if it complies with some criteria that are listed in supplement 30 (e.g., compatibility of the project with government’s priorities, technical and financial feasibility, experience of the bidder). During the tender process, the original bidder should be authorized to match the best bidder’s offer. If the original bidder does so, then the contract should be awarded to the original bidder. If not, the development cost of the original bidder should be reimbursed by the selected bidder.

10.1.1.6 Institutional PPPs

	2016	2017
Are institutional PPP arrangements allowed (e.g., joint venture between government or state-owned enterprises and private firms as a special purpose vehicle company)?	✓	✓

	1990– 2016	1990– 2017	In 2017
Institutional PPP projects (number)	7	8	1
Institutional PPP projects (as a share to the total number of PPP projects)	9%	9%	100%

The PPP guidelines are silent on state-owned enterprise (SOE) participation in PPP projects and institutional PPPs.

However, it is noted that several PPP projects with SOE participation in a joint venture arrangement with the private sector have reached financial close.

For example, in Sri Lanka, two major projects that were implemented in the port sector involved an SOE:

- The expansion of Queen Elizabeth Quay terminal in Colombo Port was conducted through a PPP contract that was signed between the Sri Lanka Ports Authority (SLPA) and the South Asia Gateway Terminals Private Limited (SAGT) in 1999. SAGT was created by SLPA and several companies to expand, improve, and operate the Queen Elizabeth Quay terminal through a 30-year BOT concession. The SLPA owned 15% of SAGT shares.
- In 2011, another PPP contract was closed to achieve the construction of the South Container Terminal of the Colombo Port Expansion Project. It was signed between the SLPA and the Colombo International Container Terminal, a joint venture of which the SLPA owned 15% of the shares.

10.1.1.7 Land Rights

	2016	2017
Which of the following is permitted to the private partner:		
Transfer land lease/use/ownership rights to third party	✓	✓
Use leased/owned land as collateral	✓	✓
Mortgage leased/owned land	✓	✓
Is there a legal mechanism for granting wayleave rights, for example, laying water pipes or fiber cables over land occupied by persons other than the government or the private partner?	✓	✓
Is there a land registry/cadastre with public information on land plots?	✓	✓
Which of the following information on land plots is available to the private partner:		

	2016	2017
Appraisal of land value	✓	✓
Landowners	✓	✓
Land boundaries	✓	✓
Utility connections	✓	✓
Immovable property on land	✓	✓
Plots classification	✓	✓

The State Lands Ordinance No. 8 of 1947 (as amended) regulates the grant and disposition of state land in Sri Lanka. It further regulates the management and control of state lands and the foreshore, and the regulation for the use of water of lakes and public streams.

Under the State Lands Ordinance No. 8 of 1947 (as amended), the President may, in the name and on behalf of the Republic of Sri Lanka, make

- absolute or provisional grants of state land;
- sell, lease, or otherwise dispose of state land;
- enter into agreements for the sale, lease, or other disposition of state land;
- issue permits for the occupation of state land;
- issue licenses to take or obtain any substance or thing found in state land; or
- sell or lease the right to mine or gem in any state land or in any land which has been disposed of by the state with a reservation of mining rights in favor of the state.

However, no disposition of state land made under the ordinance deems to confer any right to any mineral, mineral product, or mineral oil in, under, or upon such state land unless otherwise expressly provided in the instrument of disposition, and, save as so expressly provided, all such minerals, mineral products and mineral oils shall, notwithstanding any such disposition, be deemed to remain, and shall remain, the absolute property of the government of Sri Lanka.

It is noted that section 2 of the Land (Restrictions on Alienation) Act No. 38 of 2014 (as amended) restricts the transfer of title of any land situated the government of Sri Lanka.

- to a foreigner; or
- to a company incorporated in Sri Lanka under the Companies Act where any foreign shareholding in such company, either direct or indirect, is 50% or above; or
- to a foreign company, unless exempted as provided in the act.

The Land (Restrictions on Alienation) Act No.38 of 2014 (as amended) further provides that the Minister of Finance may, in consultation with the minister to whom the subject of lands has been assigned and with the prior written approval of the Cabinet of Ministers, by order published in the gazette, exempt any foreign entity engaged in the banking, financial, insurance, maritime, aviation, advanced technology, or infrastructure development project identified as a strategic development project, in terms of the Strategic Development Projects Act, No. 14

of 2008, from the application of the provisions of section 2 of the Land (Restrictions on Alienation) Act No.38 of 2014 (as amended).

Granting wayleave rights are mandated by respective sectoral laws, such as by the Electricity Act, National Water Supply and Drainage Board Acts.

Regarding available land information, there are cadastral surveys in some areas, while in other areas, a deed registration system is in place. These can be examined at land registries.

10.1.1.8 Environmental and Social Issues

	2016	2017
Is there a local regulation establishing a process for environmental impact assessment?	✓	✓
Is there a legal mechanism for the private partner to limit environmental liability for what is outside of its control or caused by third parties?	no data	no data
Is there a local regulation establishing a process for social impact assessment?	no data	no data
Is there involuntary land clearance for PPP projects?	✓	✓

The environmental laws pertaining to the implementation of projects would, in general, be applicable for the implementation of PPPs. The National Environmental Act No. 47 of 1980 (as amended) governs general environmental regulations, while there exists legislation addressing specific areas of environmental protection, such as the Coast Conservation Act No. 57 of 1981 (as amended), the Marine Pollution Prevention Act No. 35 of 2008, and the Soil Conservation Act No. 25 of 1951 (as amended).

The National Environmental Act No. 47 of 1980 (as amended) provides for the submission of an environmental impact assessment (EIA) report, which is a formal study process used to predict the environmental consequences of a proposed major development project. The EIA report highlights the problems, conflicts, or natural resource constraints that could affect the viability of a project. It provides a written analysis of the predicted environmental project and contains an environmental cost–benefit analysis, if such an analysis has been prepared. The report also includes a description of the project, the avoidable and unavoidable adverse environmental effects of the proposed prescribed project, a description of alternative to the activity that might be less harmful to the environment together with the reasons why such alternatives were rejected, and a description of any irreversible or irretrievable commitments of resources required by the proposed prescribed project. An “initial environmental examination report” may also be required which entails a written report wherein possible impacts of the prescribed project on the environment shall be assessed with a view to determining whether such impacts are significant, and as such requires the preparation of an EIA report.

The government adopted the National Involuntary Resettlement Policy in 2001 to ensure that

- project-affected persons are fairly and adequately compensated, relocated, and rehabilitated;
- delays in project implementation and cost overruns are reduced; and
- better community relations are restored among project-affected persons and host communities.

The Cabinet of Ministers approved the National Policy on Payment of Compensation in November 2008 to establish a uniform system of adequate compensation payment, based on the Land Acquisition Act, National Involuntary Resettlement Policy, and several other laws applicable to land acquisition and resettlement. It also supersedes all other ad hoc and special compensation packages used by government agencies such as that of the Road Development Authority.

10.1.1.9 Foreign Investor Participation Restrictions

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Transport			Energy		
Roads	100%	100%	Power generation	100%	100%
Railways	100%	100%	Power transmission	0%	0%
Ports	40%	40%	Power distribution	100%	100%
Airports	100%	100%	Oil and gas	40%	40%
Water and wastewater			Municipal solid waste		
Bulk water supply and treatment	100%	100%	Social infrastructure		
Water distribution	100%	100%	Healthcare infrastructure	100%	100%
Wastewater treatment	100%	100%	Healthcare services	100%	100%
Wastewater collection	100%	100%	Education infrastructure	40%	40%
Information and communication technology			Education services	40%	40%
Fixed line infrastructure	40%	40%	Government buildings	100%	100%
Fixed line services	40%	40%	Prisons and correction centers	100%	100%
Wireless/mobile infrastructure	40%	40%	Social housing	100%	100%
Wireless/mobile services	40%	40%	Sport and leisure facilities	100%	100%

The regulations made under the Foreign Exchange Act, No. 12 of 2017, through Gazette Extraordinary No. 2045/56 dated 17 November 2017, provide that any person residing outside Sri Lanka (including country funds, regional funds, investment funds, and mutual funds established outside Sri Lanka) may invest, acquire, or hold all classes of shares or an entitlement to shares issued by companies incorporated in Sri Lanka under the Companies Act, No. 7 of 2007 subject to the limitations provided for in the regulations.

The regulations provide that the aforesaid permission would not apply in respect of shares of a company proposing to carry on or carrying on pawnbroking, coastal fishing, or retail trade where a capital contributed by persons residing outside Sri Lanka is less than \$5 million.

The regulations further provide that the permission for investing, acquiring, or holding all classes of shares or an entitlement to shares as aforesaid would only apply up to 40% of the stated capital of companies carrying on certain types of businesses, unless a special approval has been granted by the BOI of Sri Lanka for a higher percentage of foreign investment in any company, only up to such higher percentage. The types of businesses that are subject to this limitation are the following:

- production of goods where Sri Lanka's exports are subject to internationally determined quota restrictions;
- growing and primary processing of tea, rubber, coconut, cocoa, rice, sugar, and spices;
- mining and primary processing of nonrenewable national resources;
- timber-based industries using local timber;
- deep-sea fishing (as defined by the ministry assigned the subject of fisheries);
- mass communication;
- education;
- freight forwarding;
- travel agencies; and
- shipping agencies.

The regulations provide that the aforementioned permission in relation to shares would apply in respect of shares in a company carrying on or proposing to carry on any of the businesses specified below only up to the percentage of the stated capital of the company, for which percentage either general or special approval has been granted by the Government of Sri Lanka, or any legal or administrative authority set up for the approval of foreign investments in such businesses as the following:

- air transportation;
- coastal shipping (as defined by the ministry assigned the subject of shipping);
- industrial undertaking in the Second Schedule of the Industrial Promotion Act, No.46 of 1990—any industry manufacturing arms, ammunitions, explosives, military vehicles and equipment, aircraft, and other military hardware;
- any industry manufacturing poisons, narcotics, alcohol, dangerous drugs and toxic, hazardous, or carcinogenic materials;
- any industry producing currency, coins, or security documents;
- large-scale mechanized mining of gems; and
- lotteries.

The BOI is empowered to approve foreign investment projects under section 16 and section 17 of the BOI Law and Strategic Development Act.

The recently enacted Inland Revenue Act No. 24 of 2017, among other things, provides for a rule-based system for income taxes and also provides for Enhanced Capital Allowances as investment incentives.

The Government of Sri Lanka intends to replace the Strategic Development Act with a new “investor-friendly” law. This was mentioned when presenting the 2016 budget.

Is there any restriction for foreign investors on?	2016	2017
Land use/ownership rights as opposed to similar rights of local investors	yes	yes
Currency conversion	no	no

The Land (Restrictions on Alienation) Act No. 38 of 2014 prohibits transfers of titles of land to foreigners, foreign companies, and companies with 50% or above of direct or indirect foreign shareholding. Exemptions can be granted, for example, in case of infrastructure development projects that have been identified as a Strategic Development Project, in terms of the provisions of the Strategic Development Projects Act No. 14 of 2008.

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	26	28	2
PPP projects with foreign sponsor participation (as a share to the total number of PPP projects)	33%	35%	67%

10.1.1.10 Dispute Resolution and Enforcement Mechanism

	2016	2017
Can a foreign law be chosen to govern PPP contracts?	✓	✓
What dispute resolution mechanisms are available for PPP agreements?		
Court litigation	✓	✓
Local arbitration	✓	✓
International arbitration	✓	✓
Has the country signed the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?	✓	✓

Sri Lanka signed the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards in 1958, and the convention was ratified in 1962.

10.1.1.11 Lender's Security Rights

	2016	2017
Does the law specifically enable lenders the following rights?		
Security over the project assets	✓	✓
Security over the land on which they are built (land use right)	✓	✓
Security over the shares of a PPP project company	✓	✓
Can there be a direct agreement between the government and lenders?	✓	✓
Do lenders get priority in the case of insolvency?	✓	✓
Can lenders be given step-in rights?	✓	✓

The PPP guidelines are silent on lender's security rights. However, different types of rights have been granted to lenders in several PPP projects in Sri Lanka.

10.1.1.12 Termination and Compensation

	2016	2017
Does the law specifically enable compensation payment to the private partner in case of early termination due to:		
Public sector default or termination for reasons of public interest	✓	✓
Private sector default	✓	✓
Force majeure	✓	✓
Does the law enable the concept of economic/financial equilibrium?	✓	✓
Does the law enable compensation payment to the private partner due to:		
Material adverse government action	✓	✓
Force majeure	✓	✓
Change in law	✓	✓

The guidelines are silent on early termination and economic equilibrium. However, all major PPP agreements have provisions regarding early termination. The other compensation matters listed in the table above are generally provided for in the PPP contracts and are enforceable through the dispute resolution mechanism contemplated in the respective agreements.

10.1.1.13 Government Support

	2016	2017
Is project development fund available?	x	x
Land acquisition support from the government:		
Resettlement and/or compensation cost to residents at the project site	✓	✓
Imposed limits on time frame to complete land acquisition (day)	x	x
Is there a dedicated agency to streamline land acquisition?	x	x
Exemption from/reduction of land use fees	x	x
Viability gap fund (VGF)	x	x
Limits to VGF as a percentage of projects capital cost	-	-
Government guarantees:		
Currency inconvertibility and transfer risk	✓	✓
Foreign exchange risk	✓	✓
War and civil disturbance risk	✓	✓
Breach of contract risk	✓	✓
Regulatory risk	✓	✓
Expropriation risk	✓	✓
Government payment obligation guarantee	✓	✓
Credit guarantees	✓	✓
Minimum demand/revenue guarantee	✓	✓
Availability-/performance-based payment contracts	✓	✓
Tax subsidies	✓	✓

Guidelines are silent on the types of government support that can be provided in PPP contracts.

Under the law, the state is required to pay resettlement and/or compensation costs to affected residents.

The indicators marked in yellow in the preceding table reflect that there is no specific law enabling such guarantees or availability payments to be provided, although these guarantees have been provided within individual contracts.

Government guarantees related to currency inconvertibility and transfer risk, foreign exchange risk, and expropriation risk may be provided through the agreement entered into by the developer with the BOI, under section 17 of the BOI Law.

According to the World Bank Group's Private Participation in Infrastructure Database, one project in the thermal generation sector has received capital subsidy from the public sector.

The major part of the energy sector PPP contracts was financed through power purchase agreements, some of them being associated to payment guarantees granted by the public sector.

PPP projects that received government support	1990–2016	1990–2017	In 2017
Viability gap fund	-	-	-
Government guarantees	25	25	-
Availability-/performance-based payment basis	67	67	-

10.1.1.14 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Power purchase agreement	✓	✓
Capacity take-or-pay contract	x	x
Fuel supply agreement	x	x
Transmission and use of system agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

10.1.2 Institutional Capacity for Implementation

10.1.2.1 Institutional Setup

	2016	2017
Is there a specialized government agency (or agencies) established for PPP purposes (e.g., PPP unit)?	✓	✓
What role does this PPP unit have?		
Guidance to and coordination between other government agencies	✓	✓
Supporting (e.g., PPP project preparation, appointment of advisers, running project development fund)	✓	✓

	2016	2017
Appraisal of PPP project feasibility studies	✓	no data
Approval of PPP projects	✗	no data
Procurement	✓	no data
Managing, monitoring, and enforcing ongoing PPP contracts	✗	no data

According to the Guidelines on Government Tender Procedure—Part II on Private Sector Infrastructure Projects (BOO/BOT/BOOT Projects), the Bureau of Infrastructure Investment (BII) of the BOI functioned as “the promoting, facilitating, and coordinating agency” assisting the line ministries or public agencies when working on PPP, under the supervision of the Ministry of Finance. However, the line ministries or agencies remained responsible decision-makers when selecting projects or approving PPP contracts. Moreover, the BII has been inactive for several years.

In July 2017, a new National Agency for Public-Private Partnership (NAPPP) was established, by decision of the cabinet of Sri Lanka, following the proposal of the Minister of Finance and mass media. In the cabinet’s decision, the new agency is referred to as an “independent institution with adequate legal, administrative and financial powers,” designed to select and implement projects based on PPP collaboration, and to provide guidance to the line ministries and agencies in respect of PPP.

The appointed head of the new PPP agency recently mentioned the importance of the establishment of a new PPP framework for the development of PPP in Sri Lanka.

PPP-promoting institutions in Sri Lanka are listed in Table 10.1.

Table 10.1: PPP-Promoting Institutions in Sri Lanka

Institution	Role in Promoting PPP
Public Utilities Commission of Sri Lanka (PUCSL)	<p>The PUCSL aims to create an environment for all inhabitants of Sri Lanka and the contributors to its development, to have access to essential infrastructure and utility services in the most economical manner, within the boundaries of the sustainable development agenda of the country.</p> <p>The PUCSL is the regulator of the electricity sector and the shadow regulator of the lubricant market in Sri Lanka. The PUCSL regulates all the utilities within its purview, to ensure safe, reliable, and reasonably priced infrastructure services for existing as well as future consumers in the most equitable and sustainable manner.</p> <p>It does not play any direct role in PPPs. However, all PPAs have to be presented to them for approval to ensure that the consumer interests are protected.</p>

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Table 10.1 *continued*

Institution	Role in Promoting PPP
Board of Investment of Sri Lanka (BOI)	<p>The BOI functions as the promoting, facilitating, and coordinating agency for promoting and facilitating foreign investment.</p> <p>Functioning as a central facilitation point for investors, its main key objectives are the following:</p> <ul style="list-style-type: none"> • foster economic development, generate new employment, • encourage and promote investment, especially foreign direct investment, • diversify the sources of foreign exchange earnings and increase export earnings, • establish investment promotion zones throughout the country especially through PPP, and • promote Sri Lanka as a trading hub. <p>While the BOI is empowered under the Board of Investment Act No. 4 of 1978 (as amended) to enter into agreements with investors, providing for investment incentives of tax holidays, tax concessions, and exemptions from custom duties and exchange control law, it is noted that since 2016, the granting of tax holidays and exemptions has been brought under the Ministry of Finance through the 2016 budget.</p>
Bureau of Infrastructure Investment (BII) of the Board of Investment of Sri Lanka	<p>The BII functions as “the promoting, facilitating, and coordinating agency” assisting the line ministries or public agencies when working on PPP, under the supervision of the Ministry of Finance.</p> <p>The Guidelines on Government Tender Procedure—Part II on Private Sector Infrastructure Projects (BOO/BOT/BOOT Projects) mention the following roles or activities of the BII throughout a PPP procurement process:</p> <ul style="list-style-type: none"> • discussing informally the projects identified by the line ministries or agencies; • vetting the financial and technical viability report prepared by the proposing ministry or agency to obtain clearance from the Ministry of Finance; • participating in the project committee established for each project, the representative of BII acting as the secretary/convener of the committee; • participating in the Proposal Opening Committee; • participating in the negotiation of the PPP Implementation Agreement; • at the end of the tender procedure, compiling a report including relevant elements on the final contract for final approval by the cabinet; and • assessing unsolicited proposals. <p>However, the BII has not been operational in the past few years.</p>
Ministry of Finance of Sri Lanka	<p>This ministry supervises the BII activity, approves PPP projects before tendering, and produces procurement guidelines.</p> <p>The National Planning Department, which functions under the Ministry of Finance, generally approves all procurements to be done by line ministries and agencies.</p>

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Table 10.1 *continued*

Institution	Role in Promoting PPP
National Agency for Public-Private Partnership	Created in July 2017, the agency is supposed to be an “independent institution with adequate legal, administrative and financial powers,” designed to select and implement projects based on PPP collaboration, and to provide guidance to the line ministries and agencies in respect of PPP. It is currently in the process of proposing revisions to institutional and legislative framework governing the PPP sector in Sri Lanka.
Line ministry/line agency	According to the existing PPP guidelines, line ministries/agencies are responsible for identifying, selecting, and preparing PPP projects. The impact of the creation of the new agency on their role was still unclear at the beginning of 2018.

PPA = power purchase agreement, PPP = public-private partnership.

Sources: Public Utilities Commission. <http://www.pucsl.gov.lk/english/>; Board of Investment of Sri Lanka. <http://www.boi.lk/>; Government of Sri Lanka, Ministry of Finance. 1998. *Guidelines on Government Tender Procedure - Part II, Private Sector Infrastructure Projects (BOO/BOT/BOOT Projects), Revised Edition*. <http://www.treasury.gov.lk/web/guest/guidelines-on-private-sector-infrastructure-projects>; Government of Sri Lanka, Cabinet of Ministers. 2017. Press briefing of Cabinet Decision taken on 2017-07-11: Establishment of the National Agency for Public-Private Partnership. http://www.cabinetoffice.gov.lk/cab/index.php?option=com_content&view=article&id=16&Itemid=49&lang=en&dID=7915.

	2016	2017
Is there a PPP project pipeline developed and available?	x	x
Is preliminary selection of PPP projects consistent with public investment prioritization?	x	x
Is there screening/identification methodology to identify a list of potential PPP projects from public investment priority projects?	x	x

There is currently no centralized PPP project pipeline available. Some line ministries or agencies, such as the Ministry of Megapolis and Western Development, have published a list of potential projects, some of them being identified as possible PPP projects. But these projects lack prioritization, and there is no framework that can help ministries and agencies determine the most appropriate method of procurement (PPPs versus traditional procurement).²

² World Bank Group. 2017. *Sri Lanka PPP Diagnostic Note. Accelerating infrastructure investment through PPPs*. Washington, DC. <http://documents.worldbank.org/curated/en/781621504159236870/Sri-Lanka-PPP-diagnostic-note-accelerating-infrastructure-investment-through-PPPs>.

10.1.2.2 Project Preparation

	2016	2017
Number of project appraisal stages	1	1
What feasibility analyses are required for the project to be approved as a PPP?		
Technical feasibility	✓	✓
Financial feasibility	✓	✓
Legal feasibility	✗	✗
Environmental and social sustainability	✗	✗
Value for money assessment	✗	✗
Fiscal affordability assessment	✗	✗
PPP structuring and risk allocation	✗	✗
Initial market testing	✗	✗
Number of approvals to be obtained by public sector to get final go-ahead to commence PPP project procurement	2	2
Is the approval from the Ministry of Finance or equivalent required before commencement of procurement?	✓	✓
Is it a normal practice to appoint independent, international, and qualified advisors to assist the government with project preparation?	✓	✓

The Guidelines on Government Tender Procedure—Part II on Private Sector Infrastructure Projects (BOO/BOT/BOOT Projects) mention the preparation of a “financial and technical viability report” on PPP projects, before the launch of a request for proposals.

The expected content of this report is not detailed. However, in practice, this report usually covers the analyses listed above.

A formal approval for the project has to be obtained on the basis of this viability report; the relevant ministry, with the assistance of the BII (in regard to the economic and financial viability of the project), has to submit its project to the Ministry of Finance for clearance. Then a memorandum has to be submitted to the cabinet for formal approval of the project.

10.1.2.3 Risk Allocation

	2016	2017
Preferred risk allocation matrix as reference	✗	✗

According to the World Bank Group PPP Procurement Benchmark 2017, risk identification, allocation, and assessment are not necessarily conducted when preparing a PPP. Procurement guidelines are silent on this matter.

10.1.2.4 Procurement

	2016	2017
Is competitive bidding the only method for PPP partner selection?	x	x
In case of competitive tender:		
Prequalification required?	x	x
Minimum time allowed to submit prequalification/expression of interest (day)	-	-
Minimum time allowed to submit a bid:		
Domestic bidding (day)	90	90
International bidding (day)	90	90
Is negotiation available?	✓	✓
Is there a process allowing unsuccessful bidders to challenge the award/make a complaint?	✓	✓
If yes, maximum time allowed to submit a complaint starting from announcement of a preferred bidder	7	7
Maximum time limit from bid closing date until selection of a preferred bidder	90 ^a	90
Maximum time limit from selection of a preferred bidder until signing the contract	1 year ^b	1 year
Transparency. Which of the following is published?		
Procurement notice	✓	✓
Q&A during bid clarification stage	✓	✓
Evaluation results to bidders	x	x
Award notice	✓	✓
Contract	x	x
Confidentiality	✓	✓

Notes:

^a A 3-month duration is recommended for the evaluation of proposals.

^b Exceptions are allowed.

Once the PPP project is formally approved, the cabinet should appoint a Cabinet Appointed Negotiating Committee, generally composed of the secretary to the Treasury (or deputy secretary to the Treasury), the secretary of the relevant line ministry, and the BOI chairman, to supervise the selection of a bidder.

A project committee should also be appointed by the secretary to the Treasury. Its role consists of preparing the request for proposal documents and conducting the procedure.

The features of the procurement process in Sri Lanka are presented in Table 10.2.

Table 10.2: PPP Procurement Process in Sri Lanka

Theme	Description
Prequalification of proponents (optional)	
Prequalification	The Cabinet Appointed Negotiating Committee (CANC) may decide to launch a prequalification of proponents. This is a mandatory requirement in large-scale projects (estimated cost exceeding \$100 million), and/or in the case of technically complex projects.
Advertisement	The prequalification of proponents should be initiated by an Invitation for expression of interest (EOI), that should be given the widest publicity in the international media.
Evaluation of proponents	The EOI will be evaluated by the project committee, which will make its recommendations to the CANC for approval.
Selection of a bidder	
Advertisement	The request for proposal (RFP) should be given wide publicity through foreign and local newspapers and electronic media and through Sri Lanka missions abroad. The press notice may also be sent to all potentially interested companies that have been in contact with the relevant public authorities or expressed an interest.
RFP	The RFP should contain all relevant information on the project, specific information required from the bidders to evaluate the proposal, and a defined format for the bidders to follow in submitting their proposals. The RFP should include a draft of the contracts and agreements that will need to be concluded between the private and public parties involved.
Time of submission	The period for submitting proposals should be 3 months. This may be increased up to 6 months depending on the nature of the project.
Evaluation of proposals	<p>The proposals are evaluated by the project committee in three stages: assessment of the completeness of the proposal, assessment of its responsiveness to the requirements and disqualification of nonresponsive RFP documents, and evaluation of proposals to rank the competitive bids.</p> <p>Evaluation of the proposals should strictly adhere to the criteria specified in the RFP. The evaluation should be completed within 3 months from the date of receipt of the proposals.</p> <p>The key factors in the comparative evaluation of different proposals should be the price offered, the duration of the operation period, and the tariff structure.</p>

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Table 10.2 *continued*

Theme	Description
Final report	The project committee should issue a final report to the CANC, including a summary of the evaluation and ranking of the proposals and recommendations.
Negotiation and award of the contract	
Negotiation	Negotiation should be conducted by the CANC, with the assistance of the project committee, if needed.
Letter of Intent	At the end of the negotiations, a letter of intent (LOI) should be submitted to the CANC and then to the cabinet for final approval. The purpose of the LOI is to grant to the preferred bidder exclusivity for an agreed period to enable the sponsor to complete all tasks that are needed before the signature of the PPP contract. The LOI should include, among other things, a completion of all amendments to the proposal agreed through negotiation with the CANC. The LOI is signed by the secretary of the line ministry and the head of the line agency involved and is countersigned by the bidder accepting the LOI.
Project finalization	
Agreements	Agreements may include the implementation agreement, a service or product purchase agreement, and several agreements that are listed in section 285 of the Guidelines on Government Tender Procedure—Part II on Private Sector Infrastructure Projects (BOO/BOT/BOOT Projects).
Final approval	Before the agreements signature, the cabinet should approve the final proposal with the agreed draft agreements.
Signature	The agreements should be signed by the Ministry of Finance, the line ministry, and the private partner.

BOO = build-own-operate, BOOT = build-own-operate-transfer, BOT = build-operate-transfer, PPP = public-private partnership.

Source: Government of Sri Lanka, Ministry of Finance. 1998. *Guidelines on Government Tender Procedure - Part II, Private Sector Infrastructure Projects (BOO/BOT/BOOT Projects)*, Revised Edition. <http://www.treasury.gov.lk/web/guest/guidelines-on-private-sector-infrastructure-projects> Project planning.

10.1.3 PPP Market Maturity

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close	78	81	3
PPP projects currently in preparation	n/a	n/a	1
PPP projects currently in procurement	n/a	n/a	6

A few projects are currently in procurement in the water, renewables, and transport sectors.

10.1.4 Financial Facilities

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	5	5	no data
PPP projects that received export credit agency/international financing institution financing	7	7	-

	2016	2017 ^a
Availability of nonrecourse/limited recourse hard currency loan	✓	✓
Maximum tenor (year)	<5 years	<5 years
Up-front arrangement fee (bps)	100–125 bps	100–125 bps
Floor rate (reference rate)	LIBOR	LIBOR
Margin rate (bps)	300–600 bps	300–600 bps
Political risk cover premium	n/a	n/a
Availability of nonrecourse/limited recourse local currency loan	✓	✓
Maximum tenor (year)	5–10 years	5–10 years
Up-front arrangement fee (bps)	100–150 bps	100–150 bps
Floor rate (reference rate)	AWPLR	AWPLR
Margin rate (bps)	150–400 bps	100–350 bps
Availability of interest rate swaps	✓	✓
Forward duration of interest rate swap (year)	3–5 years	3–5 years
Availability of currency swaps	✓	✓
Forward duration of currency rate swap (year)	3–5 years	3–5 years
Project financing through project bond issuance	✓	✓
Percentage of project bonds out of the total debt for project financing	<30%	<30%
Availability of project financing from local public sector banks	✓	✓
Max tenor for loan from local public sector banks (year)	8–10 years	8–10 years
Percentage of foreign debt out of total debt for project financing	>50%	>50%

	2016	2017 ^a
Typical D:E ratio	80:20	80:20
Timeline to financial close	>12 months	>12 months
Minimum DSCR covenant levels	1.0x–1.3x	1.0x–1.3x

bps = basis points, AWPLR = Average Weighted Prime Lending Rate published by Central Bank of Sri Lanka, D = debt, DSCR = debt-service coverage ratio, E = equity, LIBOR = London interbank offered rate.

^a Sample size = 2 PPP projects

Up to now, most infrastructure projects in Sri Lanka have been funded by loans obtained by the government. Often, these would be bilateral loans or loans from multilateral agencies and, to a lesser extent, loans from the local banking system. There have been either very few or no instances of infrastructure projects being funded by pension funds or capital markets. The state banks have undertaken the financing of government infrastructure projects to a much greater extent than the private banks.

Usually, guarantees for debt repayment are given by the Treasury on behalf of the Government of Sri Lanka, and this has been the most acceptable form of guarantee to all banks. Most private banks would exercise caution in accepting guarantees from other government agencies, especially those that do not have a revenue-generation capacity. They would, however, actively lend to profitable state-owned entities that have an assurance of continued cash flows and repayment ability.

Banks typically take mortgage rights on project assets when lending to infrastructure projects but, during the course of discussions, it was emphasized that they would evaluate the cash generation capacity of the project rather than the assets that can be mortgaged. The mortgage is more of a safeguard than an actual mode of recovery of their loans because banks do not have the ability to run projects and most assets do not carry a proper marketable valuation.

Lenders expect mortgage rights on the land and the machinery equipment of the project company to ensure the project developer remains committed to complete the project. This is usually preferred to a corporate guarantee issued by the promoter company (shareholder), though the latter is also used. Payments by the government agency are usually requested to be directed to an account maintained at the lending bank. The lender does not usually take mortgage rights over the shares of the project company.

While there is appetite for PPPs by domestic investors, there are indications of some significant liquidity constraints in the domestic market in terms of debt amounts and tenors available. One of the main reasons for the liquidity constraint has been the crowding out effect of high levels of public borrowing. In addition, commercial banks typically have limited capabilities to hedge their interest rate risk as swap markets are currently limited in Sri Lanka. Given the limited amount of capital that many banks have in Sri Lanka, there is also the possibility that Single Borrower Limits will prevent many domestic investors from raising the amounts of debt they would require financing some of the larger PPPs (Footnote 2).

10.2 Ports

10.2.1 Regulatory Framework

There is no specific legislative framework governing PPP projects for the development or operation of ports and terminals in Sri Lanka. The implementation of port-related PPP projects will be subject to industry policy and general governmental procurement guidelines.

The BOI, as the primary government authority responsible for investment, has placed emphasis on promoting foreign investment in hub-related export service sectors, by providing grants and concessions for new investors within this sector.

The BOI, in consultation with the relevant ministries, may classify any project as a Strategic Development Project, under the Strategic Development Projects Act (No. 14 of 2008).

Foreigners are not allowed to purchase land in Sri Lanka, unless exempted. The relevant minister, with approval of the Cabinet of Ministers, may exempt, on the basis of the provisions of the Land (Restrictions on Alienation) Act, in respect of projects identified under the Strategic Development Projects Act, any foreign entity engaged in a maritime development project (approved as a Strategic Development Project), from restrictions on the alienation of lands.

Although the government allows foreign ownership in most sectors, the coastal shipping sector is regulated and subject to approval by various government agencies or the BOI. Foreign participation in port-related projects could be restricted by convention, which reflects the prevalent government or state policy. Private entity ownership within the port sector is currently restricted as outlined in the following section.

10.2.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	40%	40%

Foreign investments in the following areas are restricted to 40% ownership/equity.

Business Activity	Maximum Percentage Allowed
Deep-sea fishing	40%
Freight forwarding	40%
Shipping services	40%

Source: Board of Investment of Sri Lanka. <http://www.boi.lk/>.

Foreign ownership in excess of 40% must be preapproved on a case-by-case basis by the BOI.

10.2.1.2 Government Contracting Agency

The Ministry of Ports and Shipping is the cabinet ministry responsible for formulating and implementing national policy on ports and shipping and other subjects that come under its purview. This includes the governance, implementation, creation, and development of ports.

The Sri Lanka Ports Authority (SLPA) was constituted under the provisions of the Sri Lanka Ports Authority Act No. 51 of 1979 (as amended) on 1 August 1979, effecting the merger of the existing administration (the Colombo Port Commission, a government department) and statutory companies that were previously in charge of managing the ports infrastructure.

The SLPA is the competent authority empowered by law (Sri Lanka Ports Authority Act No. 51 of 1979) to enter into agreement with a private entity in relation to the development or operation of a port. The SLPA will seek cabinet approval on the negotiated terms to sign and enter into the underlying concession agreement. Such a project is generally undertaken through a special purpose vehicle incorporated for this purpose.

All ports and port lands fall under the ownership and purview of the SLPA in terms of the SLPA Act. The SLPA owns and manages all specified commercial and regional ports in Sri Lanka, including Colombo, Hambantota, Galle, Oluvil, Kankasanturai, Point Pedru, Trincomalee, and Puttalam.

10.2.1.3 Sector-Specific Regulations

The SLPA is entitled to acquire land by following the process set out under the Land Acquisition Act where the land is required for the purposes of the business of the SLPA. The SLPA also does not receive financial allocations from the government but operates on its own revenue and resources. This is made possible under section 36 of the Sri Lanka Ports Authority Act, which gives the SLPA exclusive authority to provide all port services within the ports under its purview and domain. However, in exceptional circumstances, on a direction by the minister, any person may be authorized by the SLPA to provide port services.

The Marine Environmental Protection (Waste Reception Facilities) Regulations 2016, enacted under the Marine Pollution Prevention Act No. 35 of 2008, requires the SLPA or any service provider to provide adequate and effective waste reception facilities within or outside any port to enable any ship using such port or traversing Sri Lanka waters to discharge any waste without causing undue delay to such ship.

The Commercial Hub Regulation No. 1 of 2013 enacted under the Finance Act No. 12 of 2012 states that any new enterprise established or incorporated in Sri Lanka and engaged in the entrepot trade or the provision of logistic services such as bonded warehouses, where at least 65% of its investment has been from foreign sources and, of which the total turnover is from export of goods or services, shall be exempted from the provisions of certain legislation as specified in section 2(1) of the regulation, provided that they adhere to the minimum investment limits and other criteria specified therein.

The Merchant Shipping Secretariat is governed by

- the Merchant Shipping Act No.52 of 1971;
- the Licensing of Shipping Agents Act No. 10 of 1972; and
- the Admiralty Jurisdiction Act No. 40 of 1983, and subsequent regulations made thereafter.

10.2.1.4 Sector Regulators

There is currently no independent regulatory body for the port sector in Sri Lanka.

Institutions coming under the purview of the Ministry of Ports and Shipping include

- the Sri Lanka Ports Authority (SLPA),
- the Merchant Shipping Secretariat, and
- the Ceylon Shipping Corporation (CSC).

The SLPA's key functions are the formulation, implementation, and monitoring of policies on port sector development and shipping services in Sri Lanka. The SLPA is granted wide and far-reaching powers by the Sri Lanka Ports Authority Act. All matters concerning the development, regulation, maintenance, operation and supply of other services relative to all ports in Sri Lanka fall within the purview of the SLPA.

The Merchant Shipping Secretariat has the overall responsibility for overseeing maritime concerns and developing the government's maritime safety policy. The Merchant Shipping Secretariat is also responsible for regulating coastal maritime transportation of passengers and for creating a competitive and efficient port, shipping, and maritime market.

The CSC was established under the provisions of the Ceylon Shipping Corporation Act (No. 11 of 1971), as the national carrier of Sri Lanka. In 1992, the CSC was converted to a fully government-owned commercial enterprise through the Companies Act.

The Ministry of Environmental and Natural Resources and the Marine Environment Protection Authority regulate environmental matters at the port.

Table 10.3: Port Sector Regulatory Agencies in Sri Lanka

Agency	Function
Sri Lanka Ports Authority (SLPA)	<ul style="list-style-type: none"> • Provide efficient and regular tally and protective services in any specified port • Regulate and control navigation within the limits of, and approaches to, the specified ports • Maintain port installations and to promote the use, improvement, and development of the specified ports • Coordinate and regulate all activities within any of the specified ports excluding the functions of customs

continued on next page

Table 10.3 continued

Agency	Function
	<ul style="list-style-type: none"> Establish and maintain such lights and other means for the guidance and protection of vessels as are necessary for navigation in and out of the specified ports on and off the coast of Sri Lanka Perform such other duties as imposed on the SLPA by its act Conduct the business of the SLPA in accordance with its act such that charges for services rendered by the SLPA will secure that the revenue of the SLPA is not less than sufficient for meeting the charges that are to be paid out of its revenue Endeavor to manage each of the specified ports as self-supporting enterprises in accordance with the provision of its act
Merchant Shipping Secretariat	<ul style="list-style-type: none"> Ensure safe and efficient ships on cleaner oceans Ensure safety of life at sea Ensure quality maritime education and training Promote Sri Lankan seafarers in the international maritime industry Promote the registration of ships under the Sri Lankan flag Enforce compliance with provisions of applicable national and international conventions and standards Ensure that shipping agencies conduct their business in a legal, just, and mutually beneficial manner to both the principals and local partners
Ceylon Shipping Corporation	<ul style="list-style-type: none"> Ship owning, management, chartering, and broking Sea transportation of cargo Logistics services and customs clearance (inward and outward) Ship agency services
Marine Environment Protection Authority	<ul style="list-style-type: none"> Prevent, control, and manage the pollution of Sri Lanka's marine environment

Sources: Sri Lanka Ports Authority Act No. 51 of 1979; Ministry of Ports and Shipping. 2016. *Performance Report*. <https://www.parliament.lk/uploads/documents/paperspresented/performance-report-ministry-of-ports-shipping-2016.pdf>; Government of Sri Lanka, Ministry of Finance. 2017. *Statement of Corporate Intent for Sri Lanka Ports Authority*. March. <http://www.treasury.gov.lk/documents/10181/272149/Statement+of+Corporate+Intent+for+Sri+Lanka+Ports+Authority.pdf>.

10.2.1.5 Standard Contracts

There is currently no standardized PPP model or standard concession agreement template available for port projects. However, recent BOT/PPP concession agreements for the South Asia Gateway Terminal (SAGT) and Colombo International Container Terminals, at Colombo Port, can be considered successful model templates for future projects.

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

10.2.2 Institutional Capacity for Implementation

10.2.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The National Physical Planning Policy, established in 2011, aims to minimize the regional disparities by providing a framework to achieve an integrated and mutually complementary sectoral and regional development pattern and spatial structure for the future development of the country.

The western region is one of the five planning regions in the country that had the mandate for preparing and implementing regional physical plans. In 2016, the Ministry of Megapolis and Western Development prepared the Megapolis Western Region Master Plan—2030 Sri Lanka.

The Western Region Master Plan identified 10 preferred investment areas (also referred to as “Mega Projects”). The Aero Maritime Trade Hub is one of these preferred investment areas. The Western Region Master Plan, accompanied by the Project Identification Report (2016), provides a list of proposed future port/logistic PPP projects.

The PPP pipeline of maritime projects in Sri Lanka is given in Table 10.4.

Table 10.4: PPP Pipeline of Maritime Projects in Sri Lanka

No	Project Name	Location	Value (\$ million)
1	Establishment of The Logistic Hub ^a	Corridor between BIA and Colombo	20,750
2	Establishment of Cargo Village	Colombo	6,890
3	North Port Development Project	Colombo	2,230
4	Extension of Colombo Port Expansion Project Breakwater and Development of West Container Terminal 2	Colombo	780
5	East Container Terminal	Colombo	635
6	Development of West Container Terminal	Colombo	580
7	Extension of East Container Terminal and SAGT as Combined Back-to-Back Terminal	Colombo	500

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Table 10.4 *continued*

No	Project Name	Location	Value (\$ million)
8	Inland Water Transport Project	Colombo canals	125 (all three phases)
9	Improvement of UCT, PVQ, and Guide Pier of Colombo Port ^b	Colombo	60
10	Establishment of Logistic Corridor in Colombo Port	Colombo	50
11	Establishing a Marina by Converting Southern Part of Dickkowitz Fisheries Harbor	Dickkowitz	n/a

BIA = Bandaranaike International Airport, PPP = public-private partnership, PVQ = Prince Vijay Quay, SAGT = South Asia Gateway Terminal, UCT = Unity Container Terminal.

^a This project is a multisector project across ports, airports, highways, and railway.

^b Proposed financing method not yet identified.

Sources: IJGlobal. <http://www.ijglobal.com>; United States Agency for International Development. 2016. *Report on Sri Lanka's Current PPP Environment and Recommendations for Future PPP Strategy*. http://pdf.usaid.gov/pdf_docs/PA00MB6R.pdf; Ministry of Megapolis & Western Development of Sri Lanka. 2016. *Project Identification Report. Western Region Megapolis Planning Project*. http://www.megapolismn.gov.lk/web/images/pdf/project_identification_document_wrmpp.pdf; K. Bandara. 2016. *Govt. to develop H'tota Port on PPP basis*. *Daily Mirror*. 22 October. <http://www.dailymirror.lk/article/-Govt-to-develop-H-tota-Port-on-PPP-basis--117884.html>.

10.2.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	11

10.2.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	–	–	–
Unsolicited bids	1	2	1
Competitive bidding process	1	1	–
PPP projects currently in procurement	n/a	n/a	1

The Inland Water Transport project is part of the Colombo Megapolis transport master plan. The first phase of this ferry transport system, from Wellawatte to Battaramulla, is planned to be implemented as a PPP. A 10-year contract is being prepared. The operator shall be responsible for operating the ferry services, and financing the ferry assets. The operator will also collect all fare box and ancillary revenues. The Sri Lanka Land Reclamation and Development Corporation will provide for the basic water infrastructure, e.g., jetties, embankment enforcements, and maintaining canal depth (dredging). The project is currently in procurement (expression of interest requested in July 2017).

10.2.3 Features of Past PPP Projects

10.2.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	2	3	1
PPP projects that reached financial close (\$ million)	740	860	no data

PPP contracts in the port sector are among the most important PPPs that reached financial close in Sri Lanka in terms of investment amounts.

The first PPP reached financial close in 1999. It aimed to expand the Queen Elizabeth Quay terminal of Colombo Port from the original capacity of 250,000 twenty-foot equivalent units (TEUs) per year to a capacity of 1.1 million TEUs and to improve port efficiency.

It consisted of a BOT contract signed between the SLPA and a partnership, the South Asia Gateway Terminals Private Limited (SAGT partnership), created by several private companies and SLPA itself. The construction was completed in 2003, and led to a 30% increase in the Colombo Port capacity. The total cost of the project was estimated at \$240 million.

The second PPP reached financial close in 2011. The project involved the expansion of the Colombo Port South Container Terminal One (Phase I, Stage II), through a 30-year BOT agreement between the SLPA and a joint venture company created by China Merchants Port Holdings Company Limited and Aitken Spence PLC. The total investment was \$500 million.

The third PPP reached financial close in 2017. It consisted of a 99-year lease contract of the Hambantota Port to China Merchants Port Holdings Company, a company based in the People's Republic of China.

10.2.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	2	3	1
PPP projects with foreign sponsor participation (as a share to the total number of ports PPP projects)	100%	100%	100%

10.2.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	-	-	-
Government guarantees	-	-	-
Availability-/performance-based payment basis	-	-	-

The government will typically support strategic port projects with land acquisition, though the private sector may also be responsible in some cases.

Viability gap fund (VGF), government guarantees, and concession fee waivers may be granted by the government on a case-by-case basis depending on the project's strategic importance, its net present value, and other factors. Availability payments are not typical in the port sector.

10.2.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	2	3	1
Government-paid contracts	-	-	-
		2016	2017
What additional revenue streams are allowed?			
Land use development rights		✓	✓

	2016	2017
Wharf charge	✓	✓
Navigation charge	✓	✓
Pilotage charge	✓	✓
Channel access charge	✓	✓

10.2.3.5 Concession Fees

	2016	2017
What are the typical mechanisms for fee paid to the government?		
Lump sum	✓	✓
Royalties	✓	✓
Revenue share	✓	✓
Profit share	✓	✓
Annual lease	✓	✓

Source: Law Business Research Ltd. 2015. *Ports & Terminals 2016: Getting the Deal Through*. London.

10.2.3.6 Tariffs

	2016	2017
Does private sector have the freedom to set the tariff?	✓	✓

There are no specific laws or regulations relating to the imposition of tariffs. The SLPA sets its own tariffs for port dues and tariffs in concession agreements. The latest port tariffs (published in 2015) are applicable only to SLPA-operated terminals.

Private terminal operators, e.g., SAGT (at Colombo Port), are not bound by the SLPA tariffs, and may impose and collect their own tariffs directly from service users.

Terminal handling charges (THC) are set by the terminal operators with respect to container movement services at a terminal. For container terminals, THCs cover the movement of a container between the ship's hold and the exit-entry gate via the container terminal yard.

Table 10.5 gives a general indication of the destination THCs for a full container load as charged by the relevant terminal operator, port authority, and/or shipping line.

Table 10.5: Typical Terminal Handling Charge in Sri Lanka

Designation	Company	Year	Terminal Handling Charge (\$)	
			Twenty-foot equivalent unit	Forty-foot equivalent unit
Shipping line	Safmarine	2018	151	234
Shipping line	ANL	2014	151	234

Source: As published by companies.

10.2.3.7 Labor

	2016	2017
How is the issue of excess and efficiency of labor force typically being resolved?		
The private operator is given the freedom to hire and fire and to set its own terms and conditions of employment	yes	yes
The pre-PPP workforce is transferred to the private operator. The private operator is allowed to make gradual changes to the terms and conditions of employment, providing these are no worse than before and/or are acceptable to the unions or workers' representatives.	no	no
The port authority or the government undertakes a major labor force restructuring in advance of the PPP, and the workforce is transferred to the private operator.	no	no

10.2.3.8 Risk Allocation

Typical risk allocation arrangements in port PPP contracts are provided in Table 10.6.

Table 10.6: Typical Risk Allocation Arrangements in Port PPP Contracts in Sri Lanka

Risk	Private	Public	Shared	Comment
Demand risk	✓			Shippers and logistics businesses typically will only enter into short-term (1–4 years) terminal usage contracts. This leaves the project company exposed to significant demand risk.
Competition risk (exclusivity)	✓			In principle, the public sector is required to regulate the development of the sector.
Tariff	✓			

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Table 10.6 *continued*

Risk	Private	Public	Shared	Comment
Environmental and social risk	✓	✓		The port authority bears the greatest responsibility in developing basic infrastructure in compliance with environmental and social regulations.
Land acquisition risk		✓		The port authority bears the greatest responsibility in land acquisition/reclamation.
Permits	✓	✓		
Geotechnical risk		✓		The port authority bears the greatest responsibility in land acquisition/reclamation.
Foreign exchange risk	✓			Most international trade will be conducted in United States Dollars, mitigating this risk. Typically, cranes and equipment are imported, with purchase denominated in United States Dollars.
Political risk	✓	×		

PPP = public–private partnership.

Source: Mott MacDonald.

10.2.4 Local Capabilities

The SLPA and the government have committed themselves to continue to develop Sri Lanka as a gateway hub to South Asia. It is expected that foreign and local investors will have a major role to play in the marine-related export services.

Sri Lanka has several commercial and regional ports that provide services to the maritime transport industry. The SLPA owns and manages all specified commercial and regional ports in Sri Lanka as noted earlier. Ancillary services provided include ship repair, shipbuilding, bunkering services, salvage and towage, offshore supplies, and cruise shipping or marinas. Sri Lanka has a reasonable domestic stevedoring capacity.

The Port of Colombo, operated under the SLPA, is Sri Lanka's largest and busiest port. The SLPA reported that the port handled about 5.1 million TEUs of containerized cargo in 2015. The two-way navigation channel to the port has a depth of 20 meters and a width of 570 meters. After the completion of the Colombo Port Expansion Project East Container Terminal expansion project, the Port of Colombo will be able to accommodate 18,000 TEU container vessels. The port is also well equipped to handle liquid bulk, dry bulk, and break-bulk cargo. A single point buoy mooring facility outside the port services large crude oil carriers.

According to the Sri Lanka Export Development Board,³ Sri Lanka has a long and proud history of ship repair and shipbuilding activities. There are approximately 10 well-established boatyards

³ Sri Lanka Export Development Board. 2013. *Boat and Ship Building Industry in Sri Lanka*. http://www.srilankabusiness.com/pdf/industrycapabilityreport_boatandshipbuilding.pdf.

around the country which manufacture international branded products. Colombo Dockyard is capable of conducting both dry dock and afloat repairs. The dockyard has four dry docks ranging in size up to a maximum capacity of 125,000 deadweight ton.

CSC and Mercantile Shipping Group are the two major companies that own and operate vessels under the Sri Lankan flag. Several other smaller companies operate one or two vessels.

There is a need for the logistics capability in Sri Lanka to drastically improve to raise port capability to international standards. The World Bank has ranked Sri Lanka in the 89th position according to the Logistics Performance Index, with a mean score of 2.68.⁴ Sri Lanka's performance on trade logistics ranked lower than other Asian countries such as India, Indonesia, Pakistan, the Philippines, and Viet Nam.

With a view to further developing the shipping trade-related activities in Sri Lanka, the Colombo and Hambantota ports have been declared as free ports. The Indo-Lanka Free Trade Agreement and the Sri Lanka-Pakistan Free Trade Agreement offer duty-free exports for products manufactured in Sri Lanka, exported to India and Pakistan. Furthermore, Sri Lanka is one of seven South Asian countries that agreed to establish a South Asian Free Trade Area aimed at reducing duties for imports from member countries.

With the expected increase in transshipment operations and interregional trade, these agreements could help make Sri Lanka a gateway to South Asia.

10.2.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	2	2	no data
PPP projects that received export credit agency/international finance institution support	1	1	–

10.2.6 Challenges

Challenges of PPP progress in the port sector are shown in Table 10.7.

⁴ World Bank. 2016. *Connecting to Compete 2016: Trade Logistics in the Global Economy. The Logistics Performance Index and Its Indicators*. https://wb-lpi-media.s3.amazonaws.com/LPI_Report_2016.pdf.

Table 10.7: Challenges of PPP Progress in the Port Sector in Sri Lanka

Challenges	Currently Implemented Tackling Measures
High import duties and other taxes	Colombo and Hambantota ports have been declared as free ports. Free trade agreements have been established with India and Pakistan.
Restrictions on foreign ownership of shipping agencies and freight forwarders restrict major international shipping lines and logistic operations to base their operations in Sri Lanka	The government is considering lifting these restrictions.
Regulation governing the activities of private enterprises, e.g., long lead times for registration of firms, permits, high transaction costs	The Board of Investment of Sri Lanka currently has initiatives to improve approvals and facilitations by providing a “One-Stop Shop.”
Lack of an independent port regulator	The government has plans to draw up new legislation on the establishment of an independent regulatory body to ensure and maintain quality competitiveness at the ports.
No policy/regulation on port charges	
Poor supporting logistics infrastructure	The government has identified several development projects within the western region. One of these is, the Logistic Hub corridor between Bandaranaike International Airport and Colombo Port (\$20,750 million), which if implemented, would improve the logistics infrastructure in the country.
Slow privatization process of existing port facilities	-
Restrictive trade policies	-
Hinterland connections to ports	-

PPP = public-private partnership.

Source: Mott MacDonald.

10.3 Energy

10.3.1 Regulatory Framework

10.3.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Power generation	100%	100%

	2016	2017
Power transmission	0%	0%
Power distribution	50%	50%
Oil and gas	40%	40%

Foreign ownership is allowed in most sectors, although the landownership law prohibits foreigners from owning land with some exceptions.

In some sectors (including mining and primary processing of nonrenewable natural resources), foreign investment is restricted to 40% of the equity of the investing company. Foreign investment exceeding 40% of the shares of the company is subjected to a specific approval from the BOI.

In areas where foreign investment is permitted, foreign investors are treated equally with domestic investors and may benefit from the incentives provided by the BOI or from the Treasury.

An entity must obtain a license to generate electricity above 25 megawatts (MW) generation capacity. The licensee must be a company incorporated under the Companies Act No.7 of 2007 in which the government, a public corporation, a company in which the government holds more than 50% of the shares, or a subsidiary of such, holds the number of shares as may be specified by the secretary to the Treasury. It must be noted that, to date, there is no specific number of shares specified by the secretary to the Treasury.

The transmission system is owned and operated by the Ceylon Electricity Board (CEB), a state-owned entity and the sole electricity buyer. Only the CEB is eligible to apply for the issue of a transmission license.

Distribution is limited to companies that obtain a license, which shall be companies incorporated under the Companies Act No.7 of 2007 in which the government or a public corporation holds more than 50% of its shares.

Such licenses must be obtained through the Public Utilities Commission of Sri Lanka (PUCSL). Under section 10 (1) of the Sri Lanka Electricity Act No. 20 of 2009 (as amended), the PUCSL could also, on application made to it for that purpose, exempt any person or category of persons from the requirement of obtaining a license, having regard to the manner in which or the quantity of electricity likely to be generated or distributed by such person.

In theory, private companies (local or foreign) are thus allowed to operate in the distribution market. In practice, only one local company—Lanka Electricity Company—is active in this market, and its shareholders are the CEB and various government authorities.

Foreign investors are free to gain ownership of equity in oil and gas-related projects without involving any disinvestment or dilution of domestic equity.

Petroleum Resources Act No. 26 of 2003 provides that no person shall conduct petroleum operations in Sri Lanka unless such person enters into a resources agreement or any other appropriate agreement with the state or is otherwise authorized by or under the act to conduct petroleum operations. The act states that a contractor should pay the state a royalty on the value of all petroleum resources as resources are recovered under a development license and the state will have the option to obtain the royalty in cash or in kind as prescribed in the relevant petroleum resources agreement.

10.3.1.2 Government Contracting Agency

The CEB is a state-owned corporation established in 1969 under the Ceylon Electricity Board Act No. 17 of 1969. The CEB is engaged in power generation, transmission, distribution, and collection of revenue. It is also empowered to acquire assets. The CEB is the sole buyer of electricity from power producers and the owner and operator of the country's transmission system.

Under section 12 (1)(f) of the Ceylon Electricity Board Act No.17 of 1969 (as amended), the CEB is empowered to enter into and perform, either directly or through duly authorized agents, all such contracts as may be necessary for the performance of the duties and the exercise of the powers of the CEB.

The government, through various entities (e.g., Urban Development Authority, Government Treasury and Local Authorities) can have equity ownership in power sector assets.

The following are key government contracting agencies responsible for entering into PPP projects for the petroleum sector:

- **Exploration and extraction.** Petroleum Resources Development Secretariat (PRDS)

The PRDS was established under the Petroleum Resources Act No. 26 of 2003. The mandate of the PRDS includes discharge of such functions as are to be assigned to it from time to time by the Cabinet of Ministers. The PRDS will also act for and on behalf of the state for all purposes related to petroleum resource agreements entered into with the state. The PRDS has also been assigned much of the functions of the Petroleum Resources Development Committee (PRDC), which it is directed to assist through the act.

- **Storage.** Ceylon Petroleum Storage Terminals Limited

Ceylon Petroleum Storage Terminals Limited is a company duly incorporated under the Companies Act No. 17 of 1982 in terms of section 2 (1) of the Conversion of Public Corporations or Government-Owned Business Undertakings into Public Companies Act No.23 of 1987. It is a common user facility consisting of oil terminals, storage facilities, pipelines, and the bowser fleet, more fully described in the Government Gazette Extraordinary bearing No. 1310-8 dated 13 October 2003.

- **Importation and distribution.** Ceylon Petroleum Corporation (CPC)

The CPC was set up as a state enterprise by the Ceylon Petroleum Corporation Act No. 28 of 1961. The main objective of the CPC is to carry on business as an importer, exporter, seller, supplier, and distributor of petroleum products, and to carry on the business of exploring for the exploiting, producing, and refining of petroleum and to carry on any such business.

10.3.1.3 Sector-Specific Regulations

The legal framework for the power sector is the Sri Lanka Electricity Act of 2009. The act partly unbundled the CEB, which was until then the sector's state monopoly. The generation, transmission, and distribution units of the CEB were divided up and placed under separate management, but were not spun off into independent entities. Other companies are also allowed to operate in the market at the generation and distribution stages. In transmission, the CEB remains the sole purchaser for the independent power producers and small power producers.

The upstream oil and gas sector is governed by the Petroleum Resources Act of 2003. This act was expected to be superseded by a new Petroleum Resources Development Act under preparation in 2016; however, as of February 2018, the new act has not been enacted. The downstream petroleum industry is governed by the Petroleum Products (Special Provisions) Act No. 33 of 2002 and the Ceylon Petroleum Corporation Act No. 28 of 1961.

According to the Sri Lanka Electricity Act, a license must be obtained for the generation, transmission (eligibility is limited to the CEB), and distribution of electricity, subject to specific conditions. Where electricity generation is concerned, it is a standard condition in the generation license that the licensee adhere to all environmental laws in force at the time. No person would be granted both a generation and distribution license. Such licenses are capable of being assigned if they include a condition authorizing such assignment, and with the consent of the PUCSL and the minister. The PUCSL has the power to exempt the requirement of a license and to revoke any licenses issued.

As per the Sri Lanka Sustainable Energy Authority Act No. 35 of 2007, no person could engage in or carry on an on-grid renewable energy project for the generation and supply of power within a development area, except under the authority of a permit issued by the Sri Lanka Sustainable Energy Authority (SLSEA). The director general, after a preliminary screening and in consultation with the CEB, will submit the registered application with his or her observations to the Project Approving Committee for provisional approval. The provisional approval granted will be valid for 1 year from the date of approval and will stand cancelled automatically if the documents and other information requested for are not submitted prior to the expiry of the 1-year period. On receipt of the necessary documents and information, final approval (permit) is then granted for 20 years. However, such permit may be cancelled if the project is not commenced within 2 years of the issue of permit. At the end of the 20-year period, the permit may be extended for a further 20 years.

Public Utilities Commission of Sri Lanka Act No. 35 of 2002 provides for the establishment of the PUCSL to regulate certain utilities industries pursuant to a coherent national policy.

As per the Petroleum Resources Act No. 26 of 2003, no person could engage in oil reserve exploration without entering into a Petroleum Resource Agreement with the state. The PRDC would first call for tenders and the subsequent award is made based on the decision of the Cabinet of Ministers.

Upon the discovery of petroleum resources in pursuit of a Petroleum Resource Agreement, section 10 of the 2003 Act requires the party to apply to the PRDC for a development license to extract the crude oil. On extraction, the state is entitled to a royalty in cash or in kind, as dictated in the agreement.

The Offshore Exploration for and Exploitation of Natural Resources including Petroleum (Marine Environment Protection) Regulation No. 1 of 2011, enacted under the Marine Pollution Prevention Act No. 35 of 2008, specifies the environmental considerations to be taken into account when engaging in oil exploration and extraction.

The 2003 act further states that the holder of a development license is entitled to store petroleum resources recovered, as per the terms of the Petroleum Resource Agreement. In addition, authorization for storage of petroleum resources is extended only to the CPC, a “vendor,” or an “approved consumer” as defined in the Petroleum Products (Regulation and Control of Supplies) Act No. 34 of 1979.

According to the Ceylon Petroleum Corporation Act No. 28 of 1961 (as amended), the right to import and distribute petroleum is vested exclusively within the CPC. However, the Petroleum Products (Special Provisions) Act No. 33 of 2002 provides that the minister may issue additional licenses for importation, taking into account the interests of the national economy. Where distribution is concerned, the 1961 act also states that the Board of Directors of the CPC could grant written authority to any person to distribute petroleum.

10.3.1.4 Sector Regulators

There are two regulatory agencies for the power sector: Public Utilities Commission of Sri Lanka (PUCSL) and Sri Lanka Sustainable Energy Authority (SLSEA). The SLSEA has authority over renewable energy generation, while the PUCSL has authority over the power sector, in general.

In the oil and gas sector, the PRDS is the regulator of the upstream industry, while PUCSL regulates the downstream industry.

Details of the energy sector regulatory agencies are shown in Table 10.8.

Table 10.8: Energy Sector Regulatory Agencies in Sri Lanka

Agency	Function
Public Utilities Commission of Sri Lanka (PUCSL)	PUCSL was established in 2003. Acts as the economic, technical, and safety regulator for the electricity, petroleum, and water industries of Sri Lanka under the purview of the Public Utilities Commission of Sri Lanka Act No. 35 of 2002. In 2009, the PUCSL was empowered to regulate the generation, transmission, distribution, supply, and use of electricity through the Electricity Act No. 20.

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Table 10.8 *continued*

Agency	Function
	<p>The PUCSL issues and regulates licenses in respect of the power sector. The PUCSL acts as the economic, technical, and safety regulator for the electricity industry. The PUCSL advises the government on all matters concerning electricity. It exercises licensing, regulatory, and inspection functions, and regulates tariffs and other charges levied by licensees. The PUCSL also sets and enforces technical and other standards on safety, quality, continuity, and reliability of electricity supply and metering services. In addition, it is responsible for keeping necessary records, promoting efficient use of electricity, and undertaking incidental and ancillary measures for effective discharge of its functions.</p>
Sri Lanka Sustainable Energy Authority (SLSEA)	<p>The SLSEA was established in 2007 through the Sri Lanka Sustainable Energy Authority Act No. 35 of 2007. Its mandate is to assist in developing the national policy on energy; implement policy for renewable energy, and for energy efficiency and conservation; promote development of renewable energy projects through private investment; and conduct research on the development of indigenous energy resources. It is also responsible for the issuance of licenses for sustainable energy development. The SLSEA has the power to develop renewable energy resources; declare energy development areas; implement energy efficiency measures and conservation programs; and promote energy security, reliability, and cost-effectiveness in energy delivery and information management.</p>
Petroleum Resources Development Secretariat (PRDS)	<p>The PRDS was established in 2003 under the Petroleum Resources Act No. 26. The PRDS is the administrator of petroleum exploration and production operations in Sri Lanka. It is responsible for attracting and managing investment in the upstream oil and gas sector. The new act is expected to make the PRDS an independent and autonomous statutory body empowered to regulate the upstream oil and gas industry.</p>

Sources: ADB. 2015. *Assessment of Power Sector Reforms in Sri Lanka: Country Report*. Manila. <https://www.adb.org/documents/assessment-power-sector-reforms-sri-lanka>; Public Utilities Commission of Sri Lanka.

10.3.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Power purchase agreement	✓	✓
Capacity take-or-pay contract	x	x
Fuel supply agreement	x	x
Transmission and use of system agreement	x	x
Engineering procurement and construction contract	x	x

10.3.2 Institutional Capacity for Implementation

10.3.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✗	✗

A national strategy has been defined in the Sri Lanka Energy Sector Development Plan for a Knowledge-Based Economy, 2015–2025. It includes an investment program, which consists of a list of ongoing and future projects; however, the investment program lacks details on the procurement method.

Although several PPP deals were successfully closed in the power sector, the current institutional capacity for structuring and procuring PPPs is very limited.

Table 10.9: PPP Pipeline of Energy Projects in Sri Lanka

No	Project Name	Value (\$ million)
1	2 x 300 MW Natural Gas Combined Cycle Power Plant, Kerawalatpitya	440

MW = megawatt, PPP = public–private partnership.

Sources: United States Agency for International Development. 2016. *Report on Sri Lanka's Current PPP Environment and Recommendations for Future PPP Strategy*. http://pdf.usaid.gov/pdf_docs/PA00MB6R.pdf; Ministry of Megapolis & Western Development of Sri Lanka. *Project Identification Report. Western Region Megapolis Planning Project*. http://www.megapolismn.gov.lk/web/images/pdf/project_identification_document_wrmpp.pdf.

10.3.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	no data

10.3.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	2	2	-
Unsolicited bids	47	47	-
Competitive bidding process	6	8	2
License scheme	48	48	-
PPP projects currently in procurement	n/a	n/a	2

According to the CEB website, two solar power plant PPP projects (Sooraya Bala Sangramaya Phase II and Polonnaruwa Solar PV Power Project) were in procurement at the beginning of 2018, representing a total capacity of 100 MW. Both are build-own-operate PPP projects.

10.3.3 Features of Past PPP Projects

10.3.3.1 PPP Projects That Reached Financial Close

	1990–2016		1990–2017		In 2017	
	Number	\$ million	Number	\$ million	Number	\$ million
PPP projects that reached financial close	75	1,737	77	1,737	2	no data
<i>Renewable energy generation:</i>	65	880	67	880	2	no data
Solar	1	4	1	4	-	-
Solar/wind	1	280	1	280	-	-
Wind	10	186	10	186	-	-
Hydro	47	340	47	340	-	-
Geothermal	-	-	-	-	-	-
Waste/biomass	7	70	9	70	2	no data
<i>Thermal energy generation:</i>	10	856	10	856	-	-
Coal	1	450	1	450	-	-
Diesel	9	406	9	406	-	-
Natural gas	-	-	-	-	-	-

Many independent power producer projects have been implemented over the last 20 years, consisting at first of large thermal plants, and then of smaller renewable energy power plant projects, mainly in the hydro, solar, and wind sectors. According to the World Bank Group, the entry of independent power producers into the power sector via large thermal power projects provided the CEB with greater transparency with respect to generation costs and power tariff structure while, at the same time, helped reduce the overdependence on expensive oil-based emergency for short-term power generation (Footnote 2).

Solid waste-to-energy power plants with a disposal/treatment capacity of 650 and 500 metric tons of municipal solid waste per day at selected locations in Muthurajawela and Karadiyana were implemented in 2017. The projects were proposed as PPP projects with the Waste Management Authority of the Western Province. Following the completion of national procurement procedures by the Ministry of Megapolis and Western Development, the projects were awarded to two private parties in 2017.⁵

10.3.3.2 Foreign Investor Participation

	1990–2016		1990–2017		In 2017	
	Number	Share of the total number of projects	Number	Share of the total number of projects	Number	Share of the total number of projects
PPP projects with foreign sponsor participation	24	32%	25	32%	1	50%
Renewables	15	23%	16	24%	1	50%
Thermal	9	90%	9	90%	-	-

10.3.3.3 Government Support

	1990–2016	1990–2017	In 2017
PPP projects that received government support:			
Viability gap fund	-	-	-
Government guarantees	25	25	-
Availability-/performance-based payment basis	-	-	-

⁵ *The Sunday Leader*. Fairway Kicks Off Innovative Waste Into Energy Project. <http://www.sundaytimes.lk/170625/business-times/fairway-group-initiates-solid-waste-project-246180.html>.

10.3.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	-	-	-
Government-paid contracts ^a	67	67	-

Note:

^a Payments are actually made by CEB.

10.3.3.5 Tariffs

Sri Lanka's power tariff is highly cost reflective and is approved by the Public Utilities Commission of Sri Lanka (Commission) in accordance with section 30 of the Sri Lanka Electricity Act No. 20 of 2009. The tariff schedule reflects separately the costs of each generating, transmission, and distribution licensee providing electricity at specified times of the year. Also, the tariff permits each licensee to recover efficiently all reasonable costs incurred in carrying out its authorized activities.⁶

Prices for capacity and energy sold by generators and purchased by the single buyers are defined in power purchase agreements, establishing commercial conditions for such sales and purchases. Power purchase agreements with independent power producers and small power producers are derived through competitive bidding or based on negotiation. Generation tariffs for CEB plants are cost reflective and paid in two parts: fixed cost and variable cost (energy charge).

To incentivize the adoption of renewable energy in electricity generation, the Government of Sri Lanka introduced feed-in tariffs for power plants with a capacity of less than 10 MW. Eligible technologies are the following:

- Mini hydro;
- Mini hydro-local (local signifies that at least the hydro turbine used is locally manufactured);
- Wind;
- Wind-local (local signifies that at least the turbine blades are locally manufactured);
- Biomass-dendro (biomass through dendro plant specially grown as fuel);
- Biomass-agricultural and industrial waste (waste includes by-products such as paddy, husk, sawdust, sugarcane bagasse);
- Municipal solid waste; and
- Waste heat recovery.

The feed-in tariffs were initially launched with the “avoided cost” principle. Avoided cost represents the cost a utility would have incurred to provide the same amount of electricity from conventional fuel sources. However, this principle did not take into account fossil fuel subsidies

⁶ ADB and UNDP. 2017. *100% Electricity Generation Through Renewable Energy by 2050 – Assessment of Sri Lanka's Power Sector*.

and the 3-year average used for calculating the cost of the feed-in tariffs when, in reality, the generation prices were continuously increasing, resulting in the estimated avoided costs being lesser than actual avoided costs. This avoided cost principle was used to set up mini hydro plants across the country, despite the discrepancies in tariffs set.

In 2007, with the launch of SLSEA, the avoided cost principle was replaced with technology-specific cost-based tariff calculation, which was either a fixed tariff or a three-tier tariff structure. The rates were announced by the PUCSL in 2011 following detailed stakeholder consultations.

Under a prior commitment made to the International Monetary Fund, a cost-reflective, automatic fuel pricing mechanism was introduced recently. Under this transparent pricing formula, local fuel prices change monthly, in line with international market prices, thus minimizing fiscal risk.

	2016	2017
Is there a system of feed-in tariffs (FIT)?	✓	✓
Typical feed-in tariff levels^a	Type	SLR/kWh
Mini hydro	Hydro	13.04
Wind	Wind	19.43
Solar	Solar	N/A
Biomass	Biomass	20.70
Agro and industrial waste	Waste	14.53
Waste heat recovery	Waste	6.64

kWh=kilowatt-hour, SLK= Sri Lanka rupee.

Note:

^a Based on fixed tariff structure (a constant, all-inclusive tariff rate over a period of 20 years).

Source: Asian Development Bank and United Nations Development Programme. 2017. *100% Electricity Generation Through Renewable Energy by 2050 – Assessment of Sri Lanka's Power Sector*.

10.3.3.6 Risk Allocation

Table 10.10: Typical Risk Allocation Arrangements in the Energy Sector in Sri Lanka

Risk	Private	Public	Shared	Comment
Demand risk		✓		The absence of any policy or regulatory frameworks prioritizing the generation of renewable electricity over fossil fuel electricity makes investors unsure of the presence of a guaranteed market for renewable-generated electricity in Sri Lanka, making them reluctant to invest in the sector.

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Table 10.10 *continued*

Risk	Private	Public	Shared	Comment
Revenue collection risk		✓		
Tariff risk			✓	For small renewable energy projects with feed-in tariffs, the tariff risk is borne by the public sector.
Government payment risk	✓			Ceylon Electricity Board's poor and deteriorating financial standing poses significant offtake risk for generators.
Environmental and social risk			✓	
Land acquisition risk			✓	Most investors cite acquiring land as the biggest challenge for any new business in Sri Lanka. The government owns approximately 80% of the land. State land for industrial use is usually allotted on a 50-year lease. ^a
Permits			✓	
Handover risk			✓	
Political risk	✓			
Regulatory risk	✓			
Interconnection risk			✓	The lack of proper transmission and evacuation infrastructure is a serious barrier to investment for foreign institutional investors. This directly increases the risks for foreign institutional investors and compromises the steady returns that they require.
Grid performance risk		✓		
Hydrology risk	✓			
Exploration and drilling risk	✓			

^a <https://www.export.gov/article?id=Sri-Lanka-Openness-to-Foreign-Investment>.

Sources: Mott MacDonald; ADB and UNDP. 2017. *100% Electricity Generation Through Renewable Energy by 2050 – Assessment of Sri Lanka's Power Sector*.

10.3.4 Local Capabilities

Electricity and petroleum industries are managed largely by state-owned enterprises (SOEs), but with private sector participation in power generation, petroleum production, and distribution. Specifically, below are some thermal independent power producers in Sri Lanka, apart from the thermal generating capacity owned by the CEB. In the renewable energy arena, private participation is also seen.

- Asia Power Limited,
- Sojitz Kelanitissa (Pvt.) Limited,
- ACE Power Embilipitiya Limited,
- West Coast (Pvt.) Limited, and
- Northern Power.

10.3.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	3	3	–
PPP projects that received export credit agency/international finance institution support	6	6	–

10.3.6 Challenges

Challenges of PPP progress in the energy sector are presented in Table 10.11.

Table 10.11: Challenges of PPP Progress in the Energy Sector in Sri Lanka

Challenges	Currently Implemented Tackling Measures
Low credit rating of the sector/assets	
Multiple government agencies with overlapping functions	
Limited institutional capacity, including financing	
Lack of local financial intermediaries with knowledge of the market	
Weak grid transmission and distribution capacity	
Poor currency risk rating	

PPP = public–private partnership.

Sources: Mott MacDonald; Asian Development Bank and United Nations Development Programme. 2017. *100% Electricity Generation Through Renewable Energy by 2050 – Assessment of Sri Lanka's Power Sector*.

10.4 Water and Wastewater

10.4.1 Regulatory Framework

10.4.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects:		
Bulk water supply and treatment	100%	100%
Water distribution	100%	100%
Wastewater treatment	100%	100%
Wastewater collection	100%	100%

10.4.1.2 Government Contracting Agency

The main government contracting agency is the National Water Supply and Drainage Board (NWSDB), which is responsible for the water supply across Sri Lanka. The NWSDB currently provides water supply to more than 80% of the population, with piped water supply coverage at 49.2%. There is a goal to reach close to 60% piped water supply coverage by 2020.⁷

10.4.1.3 Sector-Specific Regulations

	2016	2017
Can the private sector be given water abstraction rights?	✓	✓
Are there regulations in place on raw water extraction?	✓	✓
Are there regulations in place on the release of treated effluents?	✓	✓

Raw water extraction

The private sector can be given water abstraction rights.

The Water Resources Board (WRB), which was established under the Water Resources Board Act No. 29 of 1964, regulates the extraction and use of groundwater in Sri Lanka. In performing its functions, the WRB is required to work in collaboration with at least 18 authorities and organizations in respect of groundwater or surface water. The Water Resources Board Act

⁷ National Water Supply and Drainage Board. Organization Structure of Corporate Planning Division. http://www.waterboard.lk/web/index.php?option=com_content&view=article&id=7&Itemid=105&lang=en. (accessed 8 January 2019).

No. 29 of 1964 (as amended) specifically provides that where any government institution, nongovernment organization, or individual uses natural water springs or groundwater for the purposes specified in the act, the entire project should be carried out under the supervision and directions of the WRB. Prior to the implementation of such activities or project, a written permission of the WRB should be obtained. Projects requiring such permission include

- construction of agro wells whose diameter is 4 meters or more, and
- dug wells or tube wells constructed for commercial purposes of the agriculture and industry or commercial agricultural activity, project, or any other type of industry started by using natural springs, production tube well, or dug wells.

The Water Resources Board Act No.29 of 1964 (as amended) further provides that a perimeter protection report should be obtained from the WRB of those who extract groundwater of more than 30,000 liters per month for commercial, agricultural, or industrial purposes.

Act No. 47 of 1980, otherwise known as the National Environmental Act (NEA), is the main national legal framework as related to environmental management and protection in the country. The National Environmental Act No. 47 of 1980 (as amended) and the order under S.23A make general provision for the protection, management, and enhancement of the environment; for the regulation, maintenance, and control of the quality of the environment; and for the prevention, abatement, and control of pollution. Section 23A of the act requires the minister to identify the activities in respect of which a license is required to be obtained, being activities, which involve or result in discharging, depositing, or emitting waste into the environment and causing pollution. Accordingly, the order obliges the establishment of a common wastewater (industrial or sewerage) treatment plant to be a prescribed activity for which an environmental protection license is required.

The National Environmental (Protection and Quality) Regulations, No. 1 of 2008 prohibits discharging, depositing, or emitting waste into the environment or conducting any prescribed activity determined by an order made under section 23A of the National Environmental Act. Where the activity causes or are likely to cause pollution, the activity cannot be carried out otherwise than under a license issued by the Central Environmental Authority (CEA) and in accordance with the standards prescribed in Schedule 1 of these regulations. The CEA, at its discretion, could impose more stringent standards than those prescribed in Schedule 1 in respect of any prescribed activity, having regard to the need to protect the environment.

No person may generate collect, transport, store, recover, recycle, or dispose waste or establish any site or facility for the disposal of any waste specified in Schedule VIII of the regulations, except under the authority of a license (Scheduled Waste Management License) issued by the CEA and in accordance with such standards and other criteria as may be specified by the CEA.

Furthermore, no person could continuously engage in the management of scheduled waste with the same physical and chemical characteristics or any aspects thereof, except under a separate license for multiple scheduled waste management operations of the same kind, issued by the CEA in accordance with the provisions of Regulation 17 for multiple scheduled waste management operations of the same kind. Such license is for a specified period and for a specified quantity of scheduled waste as shall be specified in the license. A license issued above does not authorize the mixing of waste, with scheduled waste, unless the generator, collector,

storer, transporter, or person disposing proves to the satisfaction of the CEA that such mixing may reduce the load of pollutants.

Guidelines for the Management of Scheduled Waste in Sri Lanka are detailed guidelines for the treatment and disposal of scheduled waste.

Marine Environmental Protection (issuance of permits for dumping at sea) Regulations 2013, in accordance with the National Environmental (Protection & Quality) Regulations No. 1 of 2008, details the procedure for obtaining a permit to release pollutants such as sewage sludge into the sea without being in breach of the provisions under the Marine Pollution Prevention Act. An application for a permit for dumping should be made to the Marine Environment Protection Authority in the form specified in section 4 of the regulations and must be made at least 30 days prior to the proposed dumping.

The Sri Lanka Land Reclamation and Development Corporation may cause the construction of works for the provision of public services in such areas including surface water drainage, sewerage and disposal of sewage, lighting, and water supply.

In relation to the distribution of water, the National Thoroughfares Act No. 40 of 2008 provides that no person, government department, local authority, or any other institution shall use the reservation of a road a public road or a national highway for the purpose of carrying on any gas, water, electricity, telecommunication, or any other service, without the prior written approval of the director general authority, provincial director, chief engineer, or executive engineer of the Road Development Authority.

The NEA was amended in Act No. 56 of 1988 to include a provision relating to environmental impact assessment (EIA) contained in Part IV C of the statute entitled “Approval of Projects.” Part IV C of the NEA was further amended in Act No. 53 of 2000. Under the provisions of the NEA, an environmental assessment is mandatory for the following:

- projects that fall within 100 meters (m) from the boundaries of or within any area declared under the National Heritage Wilderness Act No. 3 (1988); and the Forest Ordinance (Chapter 451);
- areas wholly or partly within the coastal zone as defined in the Coast Conservation Act No. 57 (1981); and
- projects that fall within sensitive areas, which are further defined in the provisions of the NEA as
 - any erodible area declared under the Soil Conservation Act (as amended in 1953);
 - any flood area declared under the Flood Protection Ordinance (as amended in 1955);
 - any reservation beyond the full supply level of a reservoir;
 - any archaeological reserve, ancient or protected monument as defined or declared under the Antiquities Ordinance (1965) any area declared under the Botanic Gardens Ordinance (as amended in 1973);
 - areas within or less than 100 m from the boundaries of any area declared under the Forest Ordinance and National Heritage and Wilderness Act (1988);

- areas within or less than 100 m from the boundaries of any area declared as a Sanctuary under the Fauna and Flora Protection Ordinance (1937);
- areas within or less than 100 m from the high flood level contour of a public lake, as defined by the Crown Lands Ordinance (as amended in 1956), including those declared under section 71 of the Ordinance;
- areas 60 m or less from the bank of a public stream as defined in the Crown Lands Ordinance, with a width of more than 25 m at any point; and
- areas declared under the Urban Development Authority Act No. 41 (1978) and Act No 4 (1982) section 29 (this indicates in its definition that laws are valid to the areas of the local authorities).

The criteria for triggering an EIA for the water treatment plant is a capacity of 500,000 cubic meters per day or more. The CEA will decide on the type of environmental assessment which should be developed for the project (whether an Initial Environmental Examination or an EIA) upon submission of a basic information questionnaire defining the project components and their location. The CEA will also identify the relevant project approving agencies as set out in the Gazette Extraordinary No. 859/14 issued on 23 February 1995.

10.4.1.4 Sector Regulators

Details of water sector regulatory agencies in Sri Lanka are shown in Table 10.12.

There is currently no water quality regulator. The responsibility for monitoring the water quality sits with NWSDB. However, the Health Department is also responsible for water quality monitoring. An attempt was made to introduce a regulator, which was stopped because of public protests against perception of increases in water cost.

Table 10.12: Water Sector Regulatory Agencies in Sri Lanka

Agency	Function
National Water Supply and Drainage Board	Responsible for water supply and likely to be responsible for regulation of water quality under a public-private partnership agreement
Water Resources Board (WRB)	All those who are engaged in the construction of tube wells must be registered in the WRB before engaging in drilling activities. Any tube well construction must be done in accordance to the instructions issued by the WRB and the safe yield of the well should be assessed under the supervision of the WRB. The WRB acts as an advisory body to the minister on all matters concerning the control and utilization of the water resources in Sri Lanka.
Marine Environment Protection Authority	Responsible for the issuance of permits to discharge or dump any pollutants into Sri Lankan waters

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Table 10.12 *continued*

Agency	Function
Irrigation Department	Facilitates the sustainable management and improvement of land and water resources for food, livelihoods, and environment, including provision of irrigation and drainage facilities for cultivable lands in irrigation and drainage projects.
Central Environment Agency	Environmental regulator
Sri Lanka Land Reclamation and Development Corporation	May cause the construction of works for the provision of public services in areas such as surface water drainage, sewerage and disposal of sewage, lighting, and water supply.

Source: Mott MacDonald.

10.4.1.5 Standard Contracts

The most common contracts used to date in Sri Lanka are engineering procurement and construction contracts, where the operational and maintenance aspects of the plant remain with the public sector. No water PPP project have reached financial close in Sri Lanka to date.

	2016	2017
What standardized contracts are available and used in the market?		
PPP/concession agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	✓	✓

10.4.2 Institutional Capacity for Implementation

10.4.2.1 Project Planning

The NWSDB publishes a pipeline of projects that includes PPP projects. The first PPP project appeared on the list in 2017 and is currently in procurement.

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	x	✓

PPP pipeline of water projects is shown in Table 10.13.

Table 10.13: PPP Pipeline of Water Projects in Sri Lanka

No	Project Name	Location	Capacity (m ³ /day)	Value (\$ million)
1	Weliwita Bulk Water Supply	Weliwita	180,000	310

m³/day = cubic meter per day, PPP = public-private partnership.

Source: NWSDB. www.waterboard.lk.

10.4.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

There is no public information available on PPP projects in preparation. The NWSDB has identified a list of priority projects that require funding. The National Agency for Public-Private Partnerships (NAPPP) is currently exploring the potential of structuring some of these projects as PPPs.

10.4.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	-	-	-
Competitive bidding process	-	-	-
PPP projects currently in procurement	n/a	n/a	2

The following projects are currently in procurement:

- Weliwita bulk water supply project (expression of interest requested in 2017), the NWSDB being the contracting authority. The private partner will have to design, build, finance, operate, and maintain the infrastructure.
- Hambantota seawater desalination plant PPP, the BOI of Sri Lanka being the contracting authority. Proposals for a 50-year PPP contract under an investing, constructing, and managing scheme have been requested.

10.4.3 Features of Past PPP Projects

10.4.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	-	-	-
PPP projects that reached financial close (\$ million)	-	-	-

10.4.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	-	-	-
PPP projects with foreign sponsor participation (as a share to the total number of water PPP projects)	-	-	-

10.4.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	-	-	-
Government guarantees	-	-	-
Availability-/performance-based payment basis	-	-	-

10.4.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	-	-	-
Government-paid contracts	-	-	-

10.4.3.5 Tariffs

Table 10.14: Charges for Domestic—Samurdhi Customers

Consumption Units per Month	Usage Charge (SLRs/unit)	Monthly Service Charge (SLRs)
0–5	5	50
6–10	10	50
11–15	15	50
16–20	48	400
21–25	75	400
26–30	114	800
31–40	137	800
41–50	156	1,600
51–75	169	1,600
>75	169	1,600

Source: *The Gazette of the Democratic Socialist Republic of Sri Lanka*. 2016. National Water Supply and Drainage Board Law, No. 2 OF 1974, notice under section 84. 2 November.

Table 10.15: Charges for Domestic Other than Samurdhi Recipients

Consumption Units per Month	Usage Charge (SLRs/unit)	Monthly Service Charge (SLRs)
0–5	16	250
6–10	16	250
11–15	26	250
16–20	52	400
21–25	75	400
26–30	114	800
31–40	137	800
41–50	156	1,600
51–75	169	1,600
>75	169	1,600

Source: *The Gazette of the Democratic Socialist Republic of Sri Lanka*. 2016. National Water Supply and Drainage Board Law, No. 2 OF 1974, notice under section 84. 2 November.

Table 10.16: Tariff for Public Standposts and Garden Taps in Sri Lanka

Consumption Units per Month	Usage Charge (SLRs/unit)	Monthly Service Charge (SLRs)
0–25	12	300
26–50	12	600
51–100	12	1,200
101–200	12	1,200
Over 200	12	3,000

Source: *The Gazette of the Democratic Socialist Republic of Sri Lanka*. 2016. National Water Supply and Drainage Board Law, No. 2 OF 1974, notice under section 84. 2 November.

Table 10.17: Tariff for Schools and Religious Institutions in Sri Lanka

Consumption Units per Month	Usage Charge (SLRs/unit)	Monthly Service Charge (SLRs)
0–5	7	300
6–10	7	300
11–15	7	300
16–20	7	600
21–25	7	600
26–30	7	1,000
31–40	7	1,000
41–50	19	1,000
51–75	19	2,000
>75	19	2,000

Source: *The Gazette of the Democratic Socialist Republic of Sri Lanka*. 2016. National Water Supply and Drainage Board Law, No. 2 OF 1974, notice under section 84. 2 November.

Table 10.18: Tariff for Government Institutions, Government Hospitals, Commercial Institutions, Tourist Hotels/Guesthouses, Industrial Institutions, Small and Medium-Sized Enterprises, Export Processing Zones of the Board of Investment, and Other Commercial and Private Institutions in Sri Lanka

Consumption Units per Month	Usage Charge (SLRs/unit)	Monthly Service Charge (SLRs)
0–15	100	1,000
16–50	100	1,500
51–100	100	2,000
101–200	100	2,500
201–500	100	3,500
501–1,000	100	4,800
1,001–2,000	100	9,000
2,001–4,000	100	15,000
4,001–10,000	100	30,000
10,001–20,000	100	60,000
Over 20,000	100	120,000

Source: *The Gazette of the Democratic Socialist Republic of Sri Lanka*. 2016. National Water Supply and Drainage Board Law, No. 2 OF 1974, notice under section 84. 2 November.

Table 10.19: Tariff for Shipping in Sri Lanka

Consumption Units per Month	Usage Charge (SLRs/unit)	Monthly Service Charge (SLRs)
0–15	600	1,000
16–50	600	1,500
51–100	600	2,000
101–200	600	2,500
201–500	600	3,500
501–1,000	600	4,800
1,001–2,000	600	9,000
2,001–4,000	600	15,000
4,001–10,000	600	30,000
10,001–20,000	600	60,000
Over 20,000	600	120,000

Source: *The Gazette of the Democratic Socialist Republic of Sri Lanka*. 2016. National Water Supply and Drainage Board Law, No. 2 OF 1974, notice under section 84. 2 November.

Table 10.20: Tariff for Bulk Supply in Sri Lanka

Consumption Units per Month	Usage Charge (SLRs)	Monthly Service Charge (SLRs)
0–15	22	1,000
16–50	22	1,500
51–100	22	2,000
101–200	22	2,500
201–500	22	3,500
501–1,000	22	4,800
1,001–2,000	22	9,000
2,001–4,000	22	15,000
4,001–10,000	22	30,000
10,001–20,000	22	60,000
Over 20,000	22	120,000

Source: *The Gazette of the Democratic Socialist Republic of Sri Lanka*. 2016. National Water Supply and Drainage Board Law, No. 2 OF 1974, notice under section 84. 2 November.

Table 10.21: Community-Based Organizations in Sri Lanka

Units (number)	Usage Charge (SLRs)	Monthly Service Charge (SLRs)
1 and above	16	No service charge

Source: *The Gazette of the Democratic Socialist Republic of Sri Lanka*. 2016. National Water Supply and Drainage Board Law, No. 2 OF 1974, notice under section 84. 2 November.

Table 10.22: Tariff for Bowser Supply in Sri Lanka

This Tariff shall be at the rate of SLRs100 per unit

This charge excludes cost incurred for transport and other overheads, which would be recovered on the basis of actual.

Source: *The Gazette of the Democratic Socialist Republic of Sri Lanka*. 2016. National Water Supply and Drainage Board Law, No. 2 OF 1974, notice under section 84. 2 November.

10.4.3.6 Risk Allocation

To date, no water PPP project has reached financial close in Sri Lanka; therefore, no typical risk allocation has been defined.

10.4.4 Nonrevenue Water and Infiltration

	2016	2017
Nonrevenue water (%)	31.3%	n/a ^a
Nonrevenue water (m³/km/day)	n/a	n/a
Infiltration	n/a	n/a

m³/km/day = cubic meter per kilometer per day.

^a 2017 not published to date.

Source: National Water Supply and Drainage Board. <http://waterboard.lk/web/index.php?lang=en>.

10.4.5 Local Capabilities

The NWSDB is known to have traditional procurement and engineering capacity, and is currently operating a number of water treatment plants. Weliwita is the first water PPP project to progress in Sri Lanka; the NWSDB is therefore inexperienced in PPP contracts.

Local engineering consultants are known to have experience in the design of water and wastewater facilities; however, local engineering consultants are expected to require international support for large or complex PPP projects.

Local legal companies are known to have capacity in contract preparation; however, their experience in PPP contracts is expected to be limited.

The public sector's capability in terms of river monitoring and environmental protection is below international standards.

10.4.6 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	–	–	–
PPP projects that received export credit agency/international financing institution support	–	–	–

10.4.7 Challenges

Challenges of PPP progress in the water sector are presented in Table 10.23.

Table 10.23: Challenges of PPP Progress in the Water Sector in Sri Lanka

Challenges	Currently Implemented Tackling Measures
Limited PPP experience	Training of contracting agencies required
Chronic nonrevenue water in urbanized areas	An ADB and JICA loan funded interventions to support nonrevenue water reduction in Colombo City.
Data collection	Time to be allowed for data collection and surveys
Low water tariff. True cost-recovery is not yet practiced.	The NWSDB is running a PPP tender to determine the real cost of production.

ADB = Asian Development Bank, JICA = Japan International Cooperation Agency, NWSDB = National Water Supply and Drainage Board, PPP = public-private partnership.

Source: Mott MacDonald.

10.5 Other Sectors

A few major PPP projects have recently been announced:

- **Sri Lanka Port City Tunnel.** At the end of 2017, the Government of Sri Lanka was about to sign a PPP agreement with China Harbour Engineering Company Port City Colombo, a subsidiary of China Harbour Engineering, for a tunnel that will link Bandaranaike International Airport to Marine Drive, south of Colombo.
- **Mattala Airport PPP.** In July 2017, the Government of Sri Lanka announced the development of the Mattala Airport under a PPP contractual scheme. The existing airport is currently not commercially viable. The PPP project will aim to make the infrastructure more functional and increase traffic volumes.

Other potential PPP projects for sectors not covered in preceding sections are presented below.

Two PPP projects (Kandy and Bambalapitiya) in the area of affordable housing are currently in the pipeline.

A list of infrastructure projects that may be implemented as PPPs, according to the Ministry of Megapolis and Western Development, is presented in Table 10.24.

Table 10.24: PPP Pipeline of Projects from Other Sectors in Sri Lanka

No.	Project Name	Location	Value (\$ million)
1	Railway Electrification Modernization and Expansion	Various projects	120
2	Colombo Rapid Transit System	Colombo	3,000
3	Construction of New Expressway	Western Province and connected areas	5,500

continued on next page

Table 10.24 *continued*

No.	Project Name	Location	Value (\$ million)
4	Bonded Highway for Logistics Corridor	Colombo–Katunayake	1,000
5	Development of Multimodal Transport Hubs and Centers	Various projects	220
6	Development of Off-Street Parking Facilities and Metering	Colombo	42
7	Improve Traffic Flow, Stop Light, and IT-Based Traffic Management System	Colombo, Kotte	110
8	Supply of Compressed Natural Gas and Electric Charging Facilities (50 centers)	Western Province	25
9	Solid Waste Management	Colombo and Suburban Area	210
10	Wastewater Collection, Treatment, and Disposal	Negombo Township	115
11	Wastewater Collection, Treatment, and Disposal	Kelaniya–Peliyagoda	90
12	Wastewater Collection, Treatment, and Disposal	Sri Jayawardenapura Kotte	280
13	Wastewater Collection, Treatment, and Disposal	Jaela, Ekala, and Ratmalana	100
14	Wastewater Collection, Treatment, and Disposal	Gampaha Municipal Council	125
15	Wastewater Collection, Treatment, and Disposal	Horana Industrial Zone	100
16	Wastewater Collection, Treatment, and Disposal	Mirigama Industrial Zone	80
17	Industrial Township Development	Meerigama	250
18	Industrial Township Development	Horana	310
19	Eleven Industrial Parks	Various	70
20	Business Incubators	Various	7
21	Malabe Science City	Malabe	300
22	Tourism Development and Expansion	Negombo	240
23	Senior Recreation and Care Villages	Various	40
24	Relocation of Government Offices from CBD to Government Park in Colombo Outskirts	Colombo outskirts	55,000

CBD = Central Business District, IT = information technology, PPP = public–private partnership.

Sources: Government of Sri Lanka, Ministry of Megapolis and Western Development of Sri Lanka. *Project Identification Report. Western Region Megapolis Planning Project*. https://www.megapolismn.gov.lk/web/images/pdf/project_identification_document_wrmp.pdf; United States Agency for International Development. 2016. *Report on Sri Lanka's Current PPP Environment and Recommendations for Future PPP Strategy*. http://pdf.usaid.gov/pdf_docs/PA00MB6R.pdf.

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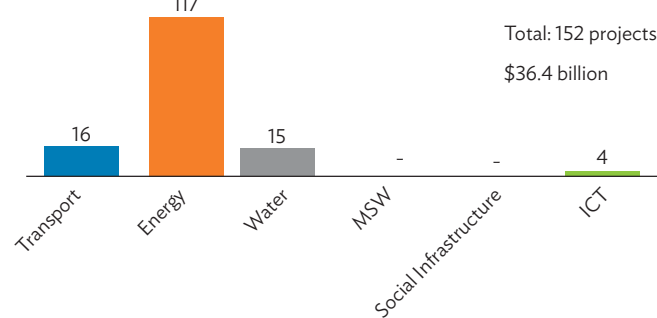
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11. THAILAND

Thailand enacted its first public-private partnership (PPP) regulation in 1992 as the Private Participation in State Undertaking Act, with the main objective of establishing an anticorruption measure to protect the interest of the public, rather than creating an enabling environment for the private sector¹. Since then, concession-type PPPs have been very common in Thailand, especially in the transport and utilities sectors.

Figure 11.1: PPP Projects in Thailand that Have Reached Financial Close, 1990–2017



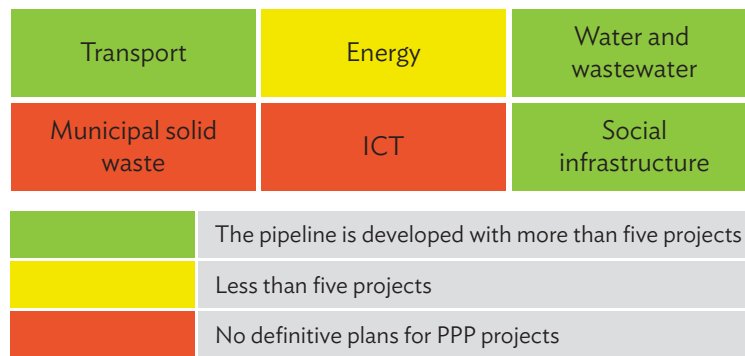
DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Sources: IJGlobal. IJGlobal Project Finance and Infrastructure Journal. <http://www.ijglobal.com>; World Bank Group. 2015. World Bank Asia Pacific Private Participation in Infrastructure (PPI) Database. <http://ppi.worldbank.org/> (accessed 5 February 2018).

The preparation and implementation of PPP projects are governed by the Private Investments in State Undertaking Act B.E. 2556 (PISU Act) issued in 2013. The PISU Act aimed to promote PPP and streamline the project approval process by setting up the PPP Policy Committee. It introduced clear systematic guidelines and precise time frames for project consideration and bidding processes, aiming to expedite the process for a PPP project approval and tender process to approximately 9 months instead of 25 months. However, despite the efforts since then, only two PPP projects have been awarded under the remit of this regulation.² For land transportation projects, there are bankability issues as these projects have a very high investment cost coupled with uncertainties in ridership estimates and the inclination of the government to pass traffic demand risk to the private sector.

¹ The *PPP Monitor* is envisaged to be a dynamic product and comments for improving data quality are welcome and can be incorporated in future editions. It should also be noted that the report is using standardized definitions which may not match a particular developing member country's definitions. For the meaning of each indicator, please refer to the Appendix.

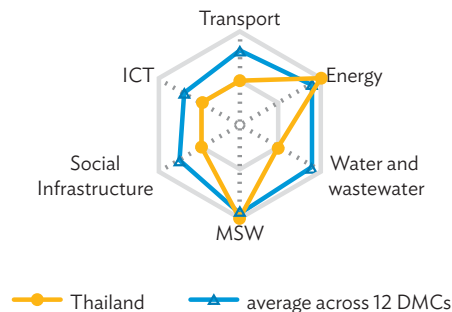
² In 2017, PPP contracts were signed for the Pink Line and Yellow Line Monorails PPPs. It took more than 1 year for project preparation and approval stage, and 1 year from cabinet approval of tender documents to commercial close.

Figure 11.2: Availability of PPP Pipelines in Thailand by Sector

ICT = information and communication technology, PPP = public-private partnership.

Note: The projects included are published in the official sources.

Source: Mott MacDonald.

Figure 11.3: Maximum Allowed Ownership of Equity in Greenfield PPP Projects in Thailand

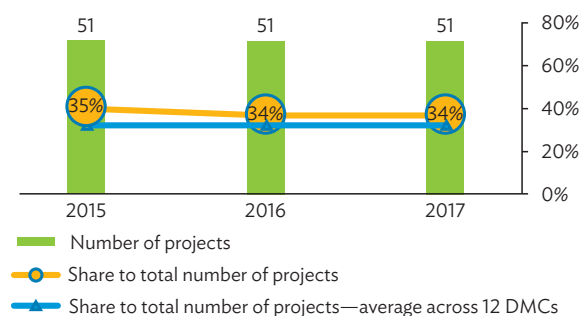
DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste.

Source: Mott MacDonald.

The State Enterprise Policy Office (SEPO) acts as a central PPP unit and as a secretariat office for the PPP Policy Committee.

In December 2017, SEPO issued the 5-year PPP Strategic Plan 2017–2021, which has superseded the previous Strategic Plan 2015–2019. The strategic plan creates a framework for private participation in state activities in various infrastructure sectors, and sets out a pipeline of 55 potential PPP projects with an estimated investment cost of about B1,662 billion (approximately \$46 billion). The number of projects was reduced to 55 in the 2017–2021 strategic plan, from 66 projects in the 2015–2019 PPP plan, as projects in the information and communication technology and municipal solid waste sectors have been removed from the pipeline. New subsectors have been added for which private participation is encouraged, including freight rail systems, airport development, cruise terminals, and energy development.

Figure 11.4: PPP Projects in Thailand with Foreign Sponsor Participation, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Figure 11.5: Share of PPP Projects in Thailand with Foreign Sponsor Participation by Sector, 1990–2017

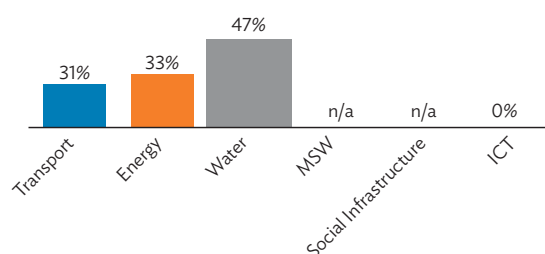
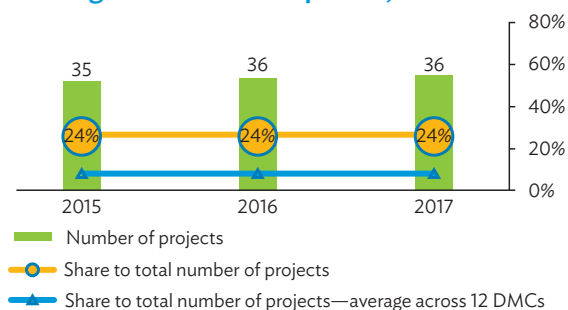


Figure 11.6: PPP Projects in Thailand with Foreign Lender Participation, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Figure 11.7: Share of PPP Projects in Thailand with Foreign Lender Participation by Sector, 1990–2017

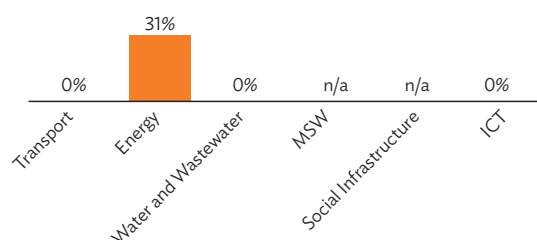


Figure 11.8: PPP Projects in Thailand Currently in Preparation, 2017

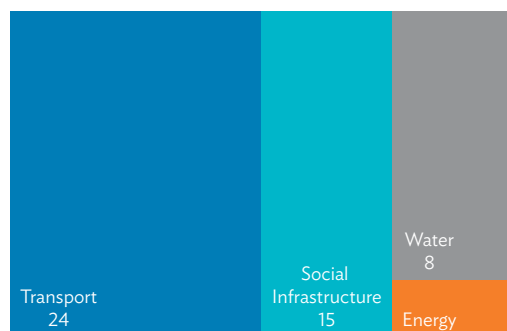
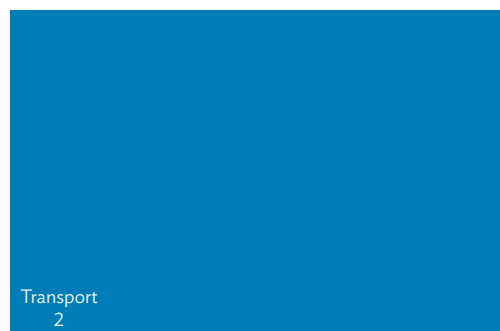


Figure 11.9: PPP Projects in Thailand Currently in Procurement, 2017



Source: Mott MacDonald.

The restriction on foreign investors, stake in PPP project companies to less than 49% limits the competition (and resultant value for money), as the controlling stake in the project company needs to belong to local companies in most sectors except energy.

Delays in PPP program implementation due to political unrest in the recent years, and the absence of a framework for accounting for contingent liabilities and providing guarantees, deter some foreign investors and lenders from participation. The majority of foreign investment has been observed in the energy sector, where project preparation, procurement, and approval processes are simpler.

Thailand has the most mature local capital market compared to similar economies of Southeast Asian countries. Project financing is mostly local currency denominated. International banks have the appetite to finance PPP projects in Thailand; however, until now all cases of foreign banks participation have been limited to the power sector, as independent power producers (IPPs) and small IPPs are considered generally well-structured.

The latest PPP strategic plan for 2017–2021 lists potential PPP projects in various stages of preparation. The majority of such projects appear to be in the transport and social infrastructure sectors.

Key Developments from 2016

In December 2017, SEPO issued the 5-year PPP Strategic Plan 2017–2021, which superseded the Strategic Plan 2015–2019.

The latest PPP Strategic Plan 2017–2021 defines two groups of sectors: one group where private investment is required, and the other group where private investment is encouraged.

In the PPP Strategic Plan 2017–2021, the telecommunications and high-speed internet sectors have been excluded from Group 1. Some categories have been added to Group 2: freight rail systems, airport development, cruise terminals, and energy development.

11.1 Country Profile

11.1.1 Regulatory Framework

11.1.1.1 PPP Law

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

	1990– 2016	1990– 2017	In 2017
Number of PPP projects that reached financial close under the latest PPP law	–	–	– ^a

Note:

^a In 2017, two projects: Pink and Yellow Monorail PPPs, were awarded under the new law; however, financial close has not been reached yet.

In Thailand, the key PPP regulation is the PISU Act B.E. 2556 (2013), which superseded the old Private Participation in State Undertaking Act. B.E. 2535 (1992).

Supporting regulations include the following:

- Notification of the Private Investments in State Undertakings Policy Committee Re: Required Details in a Project Agency's Project Appraisal Report B.E. 2557 (2014).
- Details of invitation notice, document of proposal for investment participation, method for announcing the invitation, selection methods of the selection committee prescription of bidding security and performance security, B.E. 2558 (2015).
- Notification of the Office of State Enterprise Policy Board Re: Standard Provisions of an Investment Partnership Contract B.E. 2558 (2015) (the Standard Provisions Notification).
- Announcement of the Public–Private Partnership in State Undertaking Policy Board Re: Characteristics of Amendment to Investment Partnership Contract in Material Content B.E. 2558 (2015).
- The rules and procedures for the private sector to invest in projects with a value of less than B1 billion (2016).
- Notification of the Public–Private Partnership in State Undertaking Policy Board Re: Strategic Plan for Public–Private Partnership in State Undertaking B.E. 2560–2564 (2017–2021) and Project Pipeline.

On 2 February 2016, SEPO organized a hearing on the draft form of standard contract to be used for investments under the PISU Act (the Draft Standard PPP Contract). The Draft Standard PPP Contract, though not yet published, serves as an indicator of the government's likely position on key issues.

On 19 June 2017, SEPO also held a hearing to discuss potential amendments to the PISU Act. The planned amendment is aimed at addressing the following issues, among others: (i) lack of clarity on whether a project falls within the scope of the PISU Act, and (ii) efficiency and speed of processes under the PISU Act. One solution being considered is to allow the PPP Committee to recommend that the cabinet issue decrees exempting projects in the Strategic Plan from certain requirements under the PISU Act to speed up the process. Another amendment being contemplated is the explicit exclusion of projects that only involve the leasing of government assets and/or land from the scope of PISU Act.

11.1.1.2 PPP Types

	2016	2017
Number of PPP types defined in the PPP regulations	n/a	n/a

The PISU Act is silent on the type of PPP projects. In practice, it is understood that a long-term concession agreement between the public and private party is seen as a common feature of almost all PPP projects. The three most common types of PPP arrangement are

- build–operate–transfer,
- build–transfer–operate, and
- build–own–operate.

11.1.1.3 Eligible Sectors

	2016	2017		2016	2017
Transport			Energy		
Roads	✓	✓	Power generation	✓	✓
Railways	✓	✓	Power transmission	✓	✓
Ports	✓	✓	Power distribution	✓	✓
Airports	✓	✓	Oil and gas	n/a	n/a
Water and wastewater	✓	✓	Information and communication technology	✓	✓
Municipal solid waste	✓	✓	Social infrastructure	✓	✓

The latest PPP Strategic Plan 2017–2021 defines two groups of sectors: one group where private investment is required, and one group where private investment is encouraged (Table 11.1).

Table 11.1: PPP Suited Subsectors in Thailand

Group 1: Private investment is required	Group 2: Private investment is encouraged
<ul style="list-style-type: none"> • Urban rail transit system • Toll roads in major metropolitan urban areas • Port logistics • High-speed rail 	<ul style="list-style-type: none"> • Telecommunications (network and assets) • High-speed internet • Toll roads between major metropolitan urban areas • Logistics centers • Common ticketing system • Management of airport ground • Water quality management

continued on next page

Table 11.1 continued

Group 1: Private investment is required	Group 2: Private investment is encouraged
	<ul style="list-style-type: none"> • Irrigation system • State education institutions • Hospitals and public health services • Pharmaceutical medicine and equipment • Infrastructure for science, technology, and innovation • Digital economy developments • Large convention centers • Shelters for those with low income, the elderly, the handicapped, and the disadvantaged • Freight rail systems • Airport development • Cruise terminals • Energy development

Source: State Enterprise Policy Office. 2017. *Public Private Partnership Strategic Plan (B.E. 2560–2564)*. http://www.ppp.sepo.go.th/tiny_mce/plugins/filemanager/thumbs/pipeline2560-2564Final.pdf.

While the PPP Strategic Plan 2015–2019 had the telecommunications and high-speed internet sectors in Group 1, the PPP Strategic Plan 2017–2021 transferred them to Group 2. The 2017–2021 plan added categories such as freight rail systems, airport development, cruise terminals, and energy development to Group 2; and removed solid waste management from Group 2.

However, no specific energy projects have been listed in the latest PPP strategic plan. So far, IPP schemes are widely applicable and follow a simpler and faster procurement and approval method. Private investment into the oil and gas and mining sectors is currently subject to the concession regime under respective laws on petroleum and minerals and expressly excluded from the PISU Act. However, it should be noted that under the current draft of the new Petroleum Act, other forms of PPP in the oil and gas sector may be permitted. Therefore, the PISU Act may potentially apply to oil and gas PPPs, which do not have concession arrangements.

11.1.1.4 Other Applicable Restrictions

	2016	2017
Project funding structure	none	none
Project capital investment size	Full PPP process is applicable for projects with a value of B5 billion and above.	Full PPP process is applicable for projects with a value of B5 billion and above.

11.1.1.5 Unsolicited Bids

	2016	2017
Acceptance of unsolicited proposals	✓	✓
Eligibility of the project proponent to have:		
Competitive advantage at bid evaluation	n/a	n/a
Swiss challenge	n/a	n/a
Compensation of the project development cost	n/a	n/a
Government support for land acquisition and resettlement cost	n/a	n/a
Government support in the form of viability gap fund and guarantees	n/a	n/a

Unsolicited proposal, though not prohibited in Thailand under the PISU Act, is rarely exercised. Investors can only propose an investment plan or proposal to participate in the projects that are listed in the PPP strategic plan. Under exceptional circumstances, an unsolicited bid is acceptable, but sound justification and approval of the PPP Committee are required. Procedure, conditions, and criteria on how proposals are treated and evaluated are not yet available.

It is understood that the Loxley Prachin Buri Solar Power Plant (financial close reached in 2011) and Khanom 4 Gas-Fired Combined Cycle Power Plant (financial close reached in 2013) projects were unsolicited.

11.1.1.6 State-Owned Enterprise Participation

	2016	2017
Are institutional PPP arrangements allowed (e.g., joint venture between government or state-owned enterprises and private firms as a special purpose vehicle company)?	✓	✓

	1990– 2016	1990– 2017	In 2017
Institutional PPP projects (number)	24	25	1
Institutional PPP projects (as a share to the total number of PPP projects)	16%	16%	25%

Joint ventures between state-owned enterprises (SOEs) and the private sector are uncommon in Thailand and, hence, a sound justification is required for the joint venture of SOE partners with a private sector to participate in a PPP scheme as this is seen to create a competitive advantage compared to other participants. In the past, there were very few projects, predominantly in the utilities sector, where SOEs participated as a joint sponsor (in most cases holding minority of shares).

11.1.1.7 Land Rights

	2016	2017
Which of the following is permitted to the private partner:		
Transfer land lease/use/ownership rights to third party	✓	✓
Use leased/owned land as collateral	✓	✓
Mortgage leased/owned land	✓	✓
Is there a legal mechanism for granting wayleave rights, for example, laying water pipes or fiber cables over land occupied by persons other than the government or the private partner?	✓	✓
Is there a land registry/cadastre with public information on land plots?	✓	✓
Which of the following information on land plots is available to the private partner:		
Appraisal of land value	✓	✓
Landowners	✓	✓
Land boundaries	✓	✓
Utility connections	✓	✓
Immovable property on land	✓	✓
Plots classification	✓	✓

The key regulations governing land use rights and land acquisition are

- Land Code Amendment Act 2008;
- Expropriation of Immovable Property Act B.E. 2530 (1987); and
- Procurement of Immovable Property for Public Transportation Affair Act B.E. 2540 (1997), for the use of immovable property without transferring of ownerships.

Normally, government makes land and right-of-way available necessary to execute each PPP scheme. The objectives of land use and the boundary of the required lands of each project must be specified and issued in a royal decree. A compensation committee will then be appointed to set the property value and amount of compensation. The right to develop the land is transferred to the concessionaire for the duration of the concession period.

The PISU Act requires PPP contracts to make provision for project assets, including the ownership and valuation of such assets. At this stage, no further details are provided, and so it is difficult to determine what will be included in contracts awarded under the PISU Act at this stage. The Draft Standard PPP Contract contemplates that details relating to the ownership of land and project assets will be decided between the parties on a case-by-case basis.

11.1.1.8 Environmental and Social Issues

	2016	2017
Is there a local regulation establishing a process for environmental impact assessment?	✓	✓
Is there a legal mechanism for the private partner to limit environmental liability for what is outside of its control or caused by third parties?	✓	✓
Is there a local regulation establishing a process for social impact assessment?	✓	✓
Is there involuntary land clearance for PPP projects?	✓	✓

The National Environmental Quality Act 1992 is the law governing environmental matters in Thailand. The act defines the types of projects that will require environmental impact assessment (EIA), environmental health impact assessment, or initial environmental examination. Before commencing a project in Thailand, an investor should refer to the National Environmental Quality Act 1992 or seek advice from the Environmental Impact Evaluation Bureau, Office of Natural Resources and Environmental Policy and Planning, which is responsible for the administration of the EIA process for Thailand. In practice, for most of the major PPP schemes in Thailand, if required, an EIA report will be produced by the host government agency prior to the issuance of the request for proposal. The EIA also incorporates any assessment in relation to the social impact of the project.

The government is allowed to acquire land or immovable assets for public utilities, or in the public interest, according to the Expropriation of Immovable Property Act B.E. 2530 (1987). Cost of compensation to and resettlement of local residents is managed by the government.

11.1.1.9 Foreign Investor Participation Restrictions

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Transport			Energy		
Roads ^a	49%	49%	Power generation	100%	100%
Railways	49%	49%	Power transmission	100%	100%
Ports	49%	49%	Power distribution	100%	100%

Maximum allowed foreign ownership of equity in greenfield projects					
Airports	49%	49%	Oil and gas	100%	100%
Water and wastewater			Municipal solid waste		
Bulk water supply and treatment	49%	49%	Social infrastructure		
Water distribution	49%	49%	Healthcare infrastructure	49%	49%
Wastewater treatment	49%	49%	Healthcare services	49%	49%
Wastewater collection	49%	49%	Education infrastructure	100%	100%
Information and communication technology			Education services	49%	49%
Fixed line infrastructure	49%	49%	Government buildings	49%	49%
Fixed line services	49%	49%	Prisons and correction centers	49%	49%
Wireless/mobile infrastructure	49%	49%	Social housing	49%	49%
Wireless/mobile services	49%	49%	Sport and leisure facilities	49%	49%

Note:

^a May increase to 60% or 75% with foreign business license and cabinet approval.

Is there any restriction for foreign investors on?	2016	2017
Land use/ownership rights as opposed to similar rights of local investors	yes	yes
Currency conversion	no	yes

Thailand's Land Law prevents foreigners and foreign-owned companies from owning land except in special circumstances when they are authorized by the Board of Investment. Alternately, they could either lease the land or enter into a joint venture with a local partner that provides the land use rights. The typical lease term is 30 years with the possibility of renewing the lease for an additional 30 years. There are difficulties in finding and preparing a site, which is why many investors have preferred to arrange a joint venture, with the local partner contributing the land and arranging clearance from local authorities for its use.

As for import of equipment or machinery, foreign investors are allowed to import equipment. In addition, it may be possible that under certain conditions, investors may be able to apply for special privilege through the Board of Investment to reduce or waive applicable taxes and duties.

It appears that foreign investor participation may also be permitted or prohibited, depending on the investor qualifications and requirements as specified in the prequalification invitation or the project announcement.

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	51	51	-
PPP projects with foreign sponsor participation (as a share to the total number of PPP projects)	34%	34%	n/a

11.1.1.10 Dispute Resolution and Enforcement Mechanism

	2016	2017
Can a foreign law be chosen to govern PPP contracts?	x	x
What dispute resolution mechanisms are available for PPP agreements?		
Court litigation	✓	✓
Local arbitration	✓	✓
International arbitration	✓	✓
Has the country signed New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?	✓	✓

The dispute resolution mechanism has to be stated in a PPP contract. Arbitration is possible, provided the project-owner agency can demonstrate the rationale and necessity owing to normal practice of that particular type of PPP contract or any other unavoidable cause. In the past, in most cases, disputes have been resolved through negotiation prior to a court judgment. Court-annexed conciliation and mediation are also available options. Processes in the legal system are very lengthy and usually take more than 5 years to reach a court ruling.

11.1.1.11 Lender's Security Rights

	2016	2017
Does the law specifically enable lenders the following rights?		
Security over the project assets	✓	✓
Security over the land on which they are built (land use right)	✓	✓
Security over the shares of a PPP project company	✓	✓

	2016	2017
Can there be a direct agreement between the government and lenders?	✓	✓
Do lenders get priority in the case of insolvency?	✓	✓
Can lenders be given step-in rights?	✓	✓

Current regulations do not explicitly allow lenders' security rights; however, it is understood that they can be provided on case-by-case basis. The Draft Standard PPP Contract currently being developed anticipates that the project company's rights under it will be assigned to the project lenders and that security may be granted over the project assets. The draft also specifically provides for the entry into a direct agreement between the lenders, the government, and the project company acknowledging that the lenders should have rights to step in and replace the project company in the event of a project company default. However, these are not yet published.

11.1.1.12 Termination and Compensation

	2016	2017
Does the law specifically enable compensation payment to the private partner in case of early termination due to:		
Public sector default or termination for reasons of public interest	✓	✓
Private sector default	✓	✓
Force majeure	✓	✓
Does the law enable the concept of economic/financial equilibrium?	✓	✓
Does the law enable compensation payment to the private partner due to:		
Material adverse government action	✗	✗
Force majeure	✓	✓
Change in law	✗	✗

No supportive regulations exist for compensation payable due to material adverse government action and change in law.

The Draft Standard PPP Contract provides that, in case of early termination due to public sector default or for reasons of public interest, the compensation payable to the private partner will be the market value of the project, damages suffered by the private partner, estimated loss of profits, and finance costs. In the event of termination due to private sector default, compensation will be limited to the market value of the project, to reduce any damages to the government. If termination is due to a force majeure event, compensation to the private partner will be just the market value of the project.

The Notification of the SEPO Board Re: Standard Provisions of an Investment Partnership Contract (2015) states that the PPP contract shall indicate the causes of contract termination; method for contract termination; effects of termination other than the case of expiration of the contract term, including regarding the operational method for subsequent provision of services if the project is suspended; and payment of damages in connection to contract termination. The PPP contract shall not contain provisions allowing automatic renewals or extensions of terms that do not require the parties to negotiate prior to the renewal or extension of the contract.

11.1.1.13 Government Support

	2016	2017
Is project development fund available?	✓	✓
Land acquisition support from the government:	✓	✓
Resettlement and/or compensation cost to residents at the project site	✓	✓
Imposed limits on time frame to complete land acquisition (day)	×	×
Is there a dedicated agency to streamline land acquisition?	×	×
Exemption from/reduction of land use fees	✓	✓
Viability gap fund (VGF)	✓	✓
Limits to VGF as a percentage of projects capital cost	Case by case	
Government guarantees:		
Currency inconvertibility and transfer risk	×	×
Foreign exchange risk	×	×
War and civil disturbance risk	×	×
Breach of contract risk	×	×
Regulatory risk	×	×
Expropriation risk	×	×
Government payment obligation guarantee	✓	✓
Credit guarantees	×	×
Minimum demand/revenue guarantee	×	×
Availability-/performance-based payment contracts	✓	✓
Tax subsidies	✓	✓

The details of available government support for PPP projects in Thailand are provided in Table 11.2.

Table 11.2: Details of Available Government Support for PPP Projects in Thailand

Government Support Type	Comments
Project development fund	<p>The MOF is in the process of establishing a private investment promotion fund to provide “seed money” for new investment projects. This fund will be used to support the preparation of a PPP strategic plan and to support state agencies in making project proposals and in conducting feasibility studies. This fund has to be managed by a committee chaired by the permanent secretary of the MOF.</p>
Land acquisition and resettlement	<p>For public civil infrastructure projects including roads, rails, airports, ports, gas, and water subsectors, the government is responsible for making land available. Resettlement of effected households is also part of government’s responsibility. There is no dedicated central the government organization responsible for land acquisition and resettlement. Each of the host organizations will be responsible for this. The monetary compensation that affected residents receive is considered fair in most cases. However, where land acquisition takes place in highly populated areas, conflicts often arise and often cause delays to the project. If this happens, the government can exercise their power and force residents to resettle.</p> <p>For utilities and telecommunications projects, including information and communication technology, renewable energy generation, and thermal generation subsectors, land acquisition is the responsibility of project sponsors/developers.</p>
Viability gap fund	<p>The PISU Act does not explicitly address this topic. It is up to the relevant government authorities to determine how much capital to contribute based on the feasibility study and financial plan for the project, and also the ability of the government to raise funds.</p> <p>In the past, the government typically financed all or part of civil works for metro projects either through the fiscal budget or through borrowing from multilateral institutions.</p> <p>Other kinds of government contribution, such as, equity, were also allowed under each project agency’s establishment act.</p>
Government guarantees	<p>The PISU Act and the Standard Provisions Notification provide that the PPP contract can include provisions relating to guarantees, but provide no further guidance or details on the nature of these provisions. The PISU Act states that if a PPP project requires MOF credit guarantee, upon the committee’s grant of approval in principle of the project, the project shall be submitted to the council of ministers for approval of the project as well as the expenditure limit or project debt limit.</p> <p>Generally, the government does not conduct assessments of fiscal contingent liabilities.</p> <p>In the past, funding guarantees have only been provided for government agencies and state-owned enterprises, and payment guarantees and, in a few cases, tariff rate guarantees in turn have been provided by the above agencies to the private sector under power purchase agreement/ water purchase agreement in some electricity generation and water supply PPP projects.</p>

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Table 11.2 *continued*

Government Support Type	Comments
Availability/performance-based payment contracts	Availability- and performance-based payment mechanism has been applicable in utilities PPP projects, such as power generation and bulk water supply, as well as in a few cases of urban metro projects.
Tax subsidies	There are investment incentives as established under the Investment Incentives Law (B.E. 2520 [1977]), such as tax reduction, which are mostly used in PPP infrastructure projects.

MOF = Ministry of Finance, PISU Act = Private Investments in State Undertaking Act, PPP = public-private partnership.

Source: Mott MacDonald.

PPP projects that received government support	1990–2016	1990–2017	In 2017
Viability gap fund	4	4	–
Government guarantees	58	58	–
Availability-/performance-based payment basis	117	121	4

Exhaustive data regarding PPP projects that received government support in the form of land acquisition have not been available. However, it is known that all road (four projects) and metro (three projects) PPP projects received land acquisition support, and for utilities and telecommunications projects including information and communication technology, renewable energy generation, and thermal generation subsectors, land acquisition is the responsibility of project sponsors or developers.

Similarly, for the viability gap fund (VGF), two power plant projects and two metro projects (Bangkok MRT Blue Line and Purple Line) received VGF assistance.

The numbers of PPP projects undertaken on availability-/performance-based payment basis entirely refer to energy IPP and water supply projects. Similarly, government payment guarantees were provided for certain IPP and water supply projects.

11.1.1.14 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Power purchase agreement	✓	✓
Capacity take-or-pay contract	✓	✓
Fuel supply agreement	✓	✓
Transmission and use of system agreement	✓	✓

What standardized contracts are available and used in the market?	2016	2017
Performance-based operation and maintenance contract	✓	✓
Engineering procurement and construction contract	✓	✓

11.1.2 Institutional Capacity for Implementation

11.1.2.1 Institutional Setup

	2016	2017
Is there a specialized government agency (or agencies) established for PPP purposes (e.g., PPP unit)?	✓	✓
What role does this PPP unit have?		
Guidance to and coordination between other government agencies	✓	✓
Supporting (e.g., PPP project preparation, appointment of advisers, running project development fund)	×	×
Appraisal of PPP project feasibility studies	✓	✓
Approval of PPP projects	✓	✓
Procurement	×	×
Managing, monitoring, and enforcing ongoing PPP contracts	×	×

The institutions promoting PPP in Thailand are presented in Table 11.3.

Table 11.3: PPP-Promoting Institutions in Thailand

Institution	Role in Promoting PPP
PPP Policy Committee	<p>This committee is chaired by the Prime Minister; responsibilities include</p> <ul style="list-style-type: none"> • preparing a PPP strategic plan for the cabinets' approval, • approving a PPP project in principle, • setting monetary or fiscal measures or approaches for supporting PPP, • approving non-bidding process for a PPP project, • setting procedures for project with value less than B1,000 million, and • resolving any disputes per the PISU Act.

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Table 11.3 continued

Institution	Role in Promoting PPP
The State Enterprise Policy Office PPP Unit	<p>This unit acts as a secretariat office for the PPP Policy Committee and as a central PPP unit, and in charge of multiagency coordination. Responsibilities include</p> <ul style="list-style-type: none"> • drafting a PPP strategic plan for the approval of the PPP Committee, • providing recommendation of project feasibility and submitting opinions to the PPP Committee for approval, • drafting monetary or fiscal measures or approaches for supporting PPP for the approval of the PPP Committee, • submitting opinions on a non-bidding process for a PPP project to the PPP Committee, • drafting rules and procedures for private investment under the PISU Act, • setting guidelines and approaches relating to the implementation of the PISU Act, and • reporting problems arising from the implementation of the PISU Act to the PPP Committee.

PISU Act = Private Investments in State Undertaking Act, PPP = public-private partnership.

Source: State Enterprise Policy Office. <http://www.sepo.go.th/>.

11.1.2.2 Project Planning

	2016	2017
Is there a PPP project pipeline developed and available?	✓	✓
Is preliminary selection of PPP projects consistent with public investment prioritization?	✓	✓
Is there screening/identification methodology to identify a list of potential PPP projects from public investment priority projects?	×	×

The PPP Strategic Plan 2017–2021 creates a framework for private participation in state activities in various infrastructure sectors, and sets out a pipeline of 55 potential PPP projects with an estimated investment cost of about B1,662 billion (approximately \$46 billion).

The host agency will rank PPP alternatives and justify non-PPP options by comparing the value for money among alternatives; however, no particular uniform methodology is available.

11.1.2.3 Project Preparation

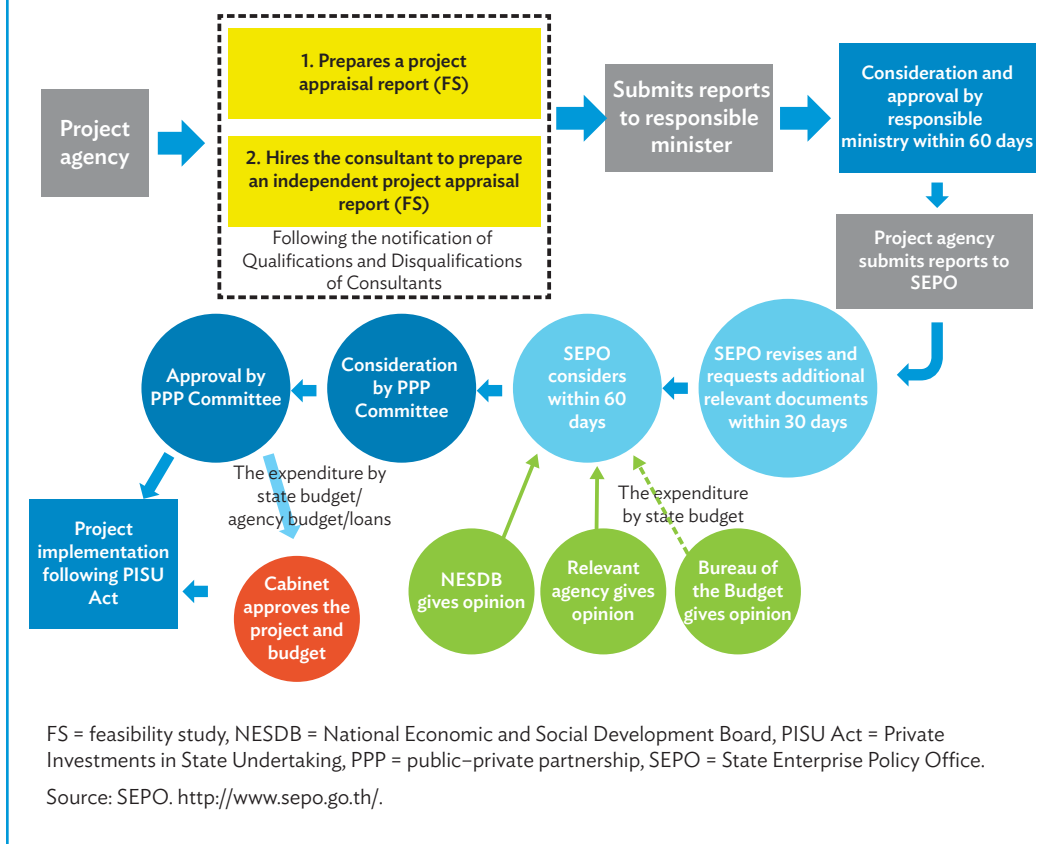
	2016	2017
Number of project appraisal stages	2	2
What feasibility analyses are required for the project to be approved as a PPP?		
Technical feasibility	✓	✓
Financial feasibility	✓	✓
Legal feasibility	✓	✓
Environmental and social sustainability	✓	✓
Value for money assessment	✓	✓
Fiscal affordability assessment	✓	✓
PPP structuring and risk allocation	✓	✓
Initial market testing	✓	✓
Number of approvals to be obtained by public sector to get final go-ahead to commence PPP project procurement	3–4	3–4
Is the approval from the Ministry of Finance or equivalent required before commencement of procurement?	✓	✓
Is it a normal practice to appoint independent, international, and qualified advisors to assist the government with project preparation?	×	×

Each government contracting agency (GCA) is responsible for its own preparation of a PPP project. The PISU Act defines the following steps prior to commencing procurement.

The procedure illustrated in Figure 11.10 is applicable to PPP projects with an investment value of B5 billion and above. For projects with an investment value of below B1 billion, an approval from the responsible minister is sufficient. For projects valued from B1 billion to under B5 billion, only those involving infrastructure and public services must go through the PPP committee, whereas the rest are approved by the responsible minister.

Although the process assumes that independent consultants shall be hired to assist government in project preparation, typically, these are local transaction advisors or universities and not international advisors (therefore, the indicator is marked red in the table).

Figure 11.10: Steps Required from Project Agency for PPP Project Preparation Procedure in Thailand



11.1.2.4 Risk Allocation

	2016	2017
Preferred risk allocation matrix as reference	x	x

Risk allocation has to be analyzed during project preparation and in the feasibility study report. However, risk allocation has to be negotiated and concluded on a case-by-case basis in the project contract.

11.1.2.5 Procurement

		2016	2017
Is competitive bidding the only method for PPP partner selection?		x	x
In case of competitive tender:			
Prequalification required?	Not always	✓	✓
Minimum time allowed to submit prequalification/expression of interest (day)		30	30
Minimum time allowed to submit a bid:			
Domestic bidding (day)		45–60	45–60
International bidding (day)		90	90
Is negotiation available?		✓	✓
Is there a process allowing unsuccessful bidders to challenge the award/file a complaint?		✓	✓
If yes, maximum time allowed to submit a complaint starting from announcement of a preferred bidder		varies	varies
Maximum time limit from bid closing date until selection of a preferred bidder		none	none
Maximum time limit from selection of a preferred bidder until signing the contract		90	90
Transparency. Which of the following is published?			
Procurement notice		✓	✓
Q&A during bid clarification stage		✓	✓
Evaluation results to bidders	Provided but without explanation	✓	✓
Award notice		✓	✓
Contract		x	x
Confidentiality		✓	✓

The features of the procurement process are presented in Table 11.4.

Table 11.4: PPP Procurement Process in Thailand

Theme	Description
Responsible agency	<p>The host agency can be a government agency having the status of a department or its equivalent, other state agency, or local administrative organization.</p> <p>Following project approval by the Public-Private Partnership Policy Committee, the host agency must set up a selection committee consisting of a representative of the host agency as chairperson, and members from the Bureau of the Budget, the SEPO, the Office of the Attorney General, and a maximum of four qualified experts. The role of the committee is to approve, invite tender, draft the terms of reference and prepare a draft contract, set the bid bond, and select the desired private entity. The selection result must be submitted to the responsible minister for comment and then submitted to the cabinet for approval.</p>
Prequalification invitation documentation (optional at selection committee's discretion)	<p>The announcement should be made (by the same methods as those set out for project announcement below) at least 30 days prior to the first day on which prequalification bids are accepted. The announcement must include</p> <ul style="list-style-type: none"> • objectives for the prequalification screening, • general requirements for the investors, and • requirements on investors' qualifications and experience regarding project implementation and financial-commercial capability. <p>Selection criteria</p> <p>Note: Depending on the size, value, complexity, and the time available to procure the project, the host agency may choose to combine prequalification process into the bidding stage. In case this method is selected, the bidders' qualification will be announced together with the invitation to bidders or the RFP document. Investors can conduct a self-assessment before purchasing the RFP document.</p>
Prequalification evaluation criteria	<p>Has ability to arrange funding and implement the project; experience in implementing similar projects; has preliminary methodology of the project implementation; must declare disputes or claims relating to contracts currently being implemented or past contracts and nationality of the investors.</p>
Prequalification evaluation method	<p>Submissions can be evaluated on the scoring scale, typically 100 points. Each investor must exceed a prescribed minimum score. Minimum score will be stated in each prequalification, typically range from 60% to 75%.</p>
Shortlist	<p>Shortlist is announced (only in cases where there is prequalification screening). The announcement of shortlisted investors must take place at least 45 days prior to the first day on which bid submissions are accepted. Where there is a shortlist, the RFP documents may only be purchased by those on the shortlist.</p> <p>In case only one investor registers and satisfies the requirements of the invitation for prequalification, or only one investor passes the prequalification, direct appointment is possible.</p>

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Table 11.4 continued

Theme	Description
Project announcement	<p>The announcement of a project's invitation to tender or RFP is organized by the host agency and must be done, at minimum, through (i) board notice on the host agency's premises, (ii) a radio or television announcement, and (iii) an announcement in a local daily newspaper in the Thai language for at least 3 consecutive days. Where the host agency believes it appropriate to have foreign bidders, the announcement should be made to relevant embassies and through any additional means. There is no set time for the announcement date post-cabinet approval. However, the announcement must be made at least 60 days prior to the first day on which bid submissions are accepted. PPP projects that are in the pipeline regularly receive news coverage, and investors generally follow the progress through this media. Invitation to tender must include</p> <ul style="list-style-type: none"> • project terms of reference (background, purpose, scope); • key qualifications required of bidders; • tender document fee; • place, date, and time for RFP documents purchase; • place, date, and time for bid submissions; • bid bonds and related conditions; • selection criteria; and • bid appraisal fee.
RFP documentation	<ul style="list-style-type: none"> • General information about the project, including contents and scope, detailed description of outputs of the project and the services • Bidders' qualification may be included if the prequalification process is combined with the bidding process. • Instructions to bidders, including bidding procedures and the bidding data sheet • Project requirements in accordance with the approved feasibility study: <ul style="list-style-type: none"> – <i>Technical requirements</i>: standards for implementation of the project, quality of project facilities, products and services to be provided; detailed description of the technical requirements and the technical specifications to be used for assessment of bid proposals; and requirements on environment and safety. – <i>Commercial-financial requirements</i>: financial plan (total investment capital, structure of capital sources and plan on capital mobilization; state investment capital for project implementation (if any); expenditures; revenue sources, price, fees for products and services; term for recovering capital and gaining profits); and requirements on risk sharing. • Evaluation methods • Standard bid forms • Project contract type, term sheet, and draft contract, including requirements on performance, facility quality standard, service provision standard, tariff mechanism, applicable

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Table 11.4 *continued*

Theme	Description
	<p>regulations, contract rewards and penalties, force majeure events, and the review of contract during the operation of the project and other applicable contents</p> <ul style="list-style-type: none"> • Draft contract documents may be included. Whether or not investors can submit a mark-up version with their own requirement depends on the RFP.
Methods of interactions with the bidders	<ul style="list-style-type: none"> • Question and answers in writing • Bid conferences/clarification
Evaluation of technical proposals	<ul style="list-style-type: none"> • Depending on the nature of the project, technical criteria include the following aspects: quantity and quality; operation, management, conducting business, and maintenance; and environment and safety. • Submissions can be evaluated on the scoring scale of 100%. Investor must exceed a prescribed minimum score, which is typically not less than 65%–75% of the total score, and the score of each basic required item shall not be less than 65%–70% of the maximum score for such item.
Evaluation of financial proposals	<p>Evaluation of financial proposals is carried out only for investors that satisfy the aforementioned technical requirements. Evaluation can be done based on the following methods:</p> <ul style="list-style-type: none"> • lowest price, • lowest state capital contribution, • highest payment to the state budget, and • a combination of the above. <p>The investor that proposes the best financial offer to the government is a preferred bidder. Because the project budget had been approved by the cabinet, the financial offer by each investor should be close to the published median price determined by the host agency.</p>
Selection of Preferred Bidder	
Contract negotiation	<p>The preferred bidder is invited for negotiations with the selection committee on state benefits (if any) and draft investment contract. The final financial offer should be at least equal or better (beneficial to the government) than the budget allocated.</p> <p>Within 15 days of determining the result of the selection and negotiation process, the selection committee must submit the results to SEPO and the draft investment contract that has been negotiated with the private entity selected for investment to the Office of the Attorney General for review.</p> <p>Within 45 days, the SEPO and the Office of the Attorney General shall give an opinion on the private entity selection, public monetary and fiscal obligations, and the reviewed draft investment contract, and submit the opinion along with relevant evidence to the responsible minister.</p> <p>Within 30 days, the responsible minister shall give an opinion on the entire matter and submit the same to the council of ministers for consideration.</p>

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Table 11.4 *continued*

Theme	Description
Contract signing	Upon approval by the Council of Ministers of the private entity selection result and draft investment contract, the host agency shall proceed to sign the investment contract with the private entity selected for investment.

PPP = public-private partnership, RFP = request for proposal, SEPO = State Enterprise Policy Office.

Sources: State Enterprise Policy Office. 2017. Strategic PPP Plan 2017. Public Private Partnership (PPP) in Thailand. <https://www.unescap.org/sites/default/files/PPP%20Thailand-sent.pdf>; Government of Thailand. 2013. Private Investments in State Undertakings Act, B.E. 2556 (2013).

11.1.3 PPP Market Maturity

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close	148	152	4
PPP projects currently in preparation	n/a	n/a	49
PPP projects currently in procurement	n/a	n/a	2

11.1.4 Financial Facilities

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	36	36	–
PPP projects that received export credit agency/international financing institution financing	16	16	–

	2016 ^a	2017 ^b
Availability of nonrecourse/limited recourse hard currency loan	✓	✓
Maximum tenor (year)	15–20 years	18–20 years
Up-front arrangement fee (bps)	100–300 bps	100–150 bps
Floor rate (reference rate)	LIBOR	LIBOR
Margin rate (bps)	100–500 bps	150–300 bps
Political risk cover premium	n/a	n/a

	2016 ^a	2017 ^b
Availability of nonrecourse/limited recourse local currency loan	✓	✓
Maximum tenor (year)	20 years	18–20 years
Up-front arrangement fee (bps)	100–150 bps	100–150 bps
Floor rate (reference rate)	THBFIX	THBFIX
Margin rate (bps)	200–400 bps	200–350 bps
Availability of interest rate swaps	✓	✓
Forward duration of interest rate swap (year)	5–9 years	10–15 years
Availability of currency swaps	✓	✓
Forward duration of currency rate swap (year)	>10 years	>10 years
Project financing through project bond issuance	✓	✓
Percentage of project bonds out of total debt for project financing	<30%	<30%
Availability of project financing from local public sector banks	✓	✓
Max tenor for loan from local public sector banks (year)	15–18 years	15–18 years
Percentage of foreign debt out of total debt for project financing	30–50%	30–50%
Typical Debt to Equity ratio	75:25	65:35
Timeline to financial close (month)	6–12 months	6–12 months
Minimum DSCR covenant levels	1.25x–1.5x	1.25x–1.5x

bps = basis points, DSCR = debt–service coverage ratio, LIBOR = London interbank offered rate, THBFIX = Thai Baht Interest Rate Fixing.

^a Sample size = 2 PPP projects

^b Sample size = 4 PPP projects

Thailand has the most mature local capital market compared to similar economies of Southeast Asian countries. Project financing is mostly local currency denominated. International banks are willing to finance PPP projects in Thailand; however, until now all cases of foreign banks participation have been limited to the power sector since IPPs and small IPPs are considered generally well-structured.

Multilateral agencies and export credit agencies have also played an important role in supporting project finance transactions in Thailand in recent years. For example, the Asian Development Bank (ADB) and the International Finance Corporation have been supporting project financing in the renewable energy sector, most notably in the wind and solar space.³

Table 11.5 shows the most active banks (in the past 24 months) for project finance in Thailand.

Table 11.5: Active Banks for Project Finance in Thailand

Name	Total Project Financing (\$ million)	Transactions
Siam Commercial Bank	2,308	15
Kasikorn Bank	466	4
Ayudhya Bank	410	3
Bangkok Bank	369	6
Krung Thai Bank	40	4

Source: Inframotion Deals.

A few key features of project financing in Thailand are as follows:

- **Security.** The law in Thailand officially recognizes two methods of taking security.
 - **Mortgage.** This is available for security over immovable property (such as land and buildings) and certain types of machinery (machinery that is eligible for registration under the Machinery Registration Act).
 - **Pledge.** This is available for security over movable property, such as shares in the pledger's company, instruments of investment, and unregistered machinery.
 - **Assignment.** Although not officially recognized by law (such as under bankruptcy proceedings) as a form of security interest, quasi-security by means of assignment of rights is also common in Thailand. Furthermore, under the new Business Collateral Act, the types of assets that can be used as collateral have been expanded to include accounts receivables, inventory, raw materials, and intellectual property.
- **Subordination.** Debt subordination through contracts is recognized in Thailand.

In Thailand, full and/or limited recourse is typically provided to sponsors as part of the project finance package, especially to support overruns.

³ IFLR1000. <https://www.iflr1000.com>.

11.2 Roads

11.2.1 Regulatory Framework

11.2.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	49% ^a	49% ^b

Notes:

^a May increase to 60% or 75% with foreign business license and cabinet approval.

^b May increase to 60% or 75% with foreign business license and cabinet approval.

11.2.1.2 Government Contracting Agency

The key contracting agencies for road and tollway projects are the Department of Highways, Department of Rural Roads, and Expressway Authority of Thailand, which are being overseen by the Ministry of Transport (MOT).

11.2.1.3 Sector-Specific Regulations

	2016	2017
Does the private partner have a legal right to charge users?	✓	✓

11.2.1.4 Sector Regulators

Since the sector still lacks an independent regulator, a central unit within the MOT provides overall checks and balances on the service performance, standard, and tariff. In addition, each agency has its own department that acts as internal project regulator.

11.2.1.1 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	×	×
Performance-based operation and maintenance contract	×	×
Engineering procurement and construction contract	✓	✓

11.2.2 Institutional Capacity for Implementation

11.2.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

PPP pipeline of road projects is listed in Table 11.6.

Table 11.6: PPP Pipeline of Road Projects in Thailand

No.	Project Name	Length (km)	Value (\$ million)
1	Kathu–Patong Expressway Project (Phuket Province)	4	365
2	Intercity Motorway (Western Outer Bangkok Ring Road–Ratchburi [Paktho] [HW#35])	20	2,540
3	Intercity Motorway (Nakhon Pathom–Cha-Am)	110	2,300
4	Intercity Motorway (Hat Yai–Thailand–Malaysia border)	37	870
5	Intercity Motorway (Extension Part of Uttraphimuk Elevated Tollway, Rangsit–Bang Pa-In)	18	840
6	Intercity Motorway (Bang Pa-In–Nakorn Ratchasima)	196	3,330
7	Intercity Motorway (Bang Yai–Kanchanaburi)	96	2,400
8	Intercity Motorway (Bang Pa-In–Nakorn Sawan)	175	1,140

km = kilometer, PPP = public–private partnership.

Note: Exchange rate: \$1 = B35.

Source: State Enterprise Policy Office. 2017. Strategic PPP Plan 2017. Public Private Partnership (PPP) in Thailand. http://www.ppp.sepo.go.th/tiny_mce/plugins/filemanager/thumbs/pipeline2560-2564Final.pdf.

11.2.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	5

11.2.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	-	-	-
Unsolicited bids	-	-	-
Competitive bidding process	3	3	-
PPP projects currently in procurement	n/a	n/a	2 ^a

Note:

^a Number 6 and number 7 from the pipeline in Table 11.6.

11.2.3 Features of Past PPP Projects

11.2.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	4 ^a	4	-
PPP projects that reached financial close (\$ million)	390	390	-

Note:

^a The number includes the Don Muang Tollway project, which reached financial close before 1990.

11.2.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	-	-	-
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	0%	0%	0%

11.2.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	-
Government guarantees:			
Minimum traffic/revenue guarantees	-	-	-
Availability-/performance-based payment basis	-	-	-

11.2.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	4	4	-
Government-paid contracts	-	-	-

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	✓	✓
Advertising	✓	✓

11.2.3.5 Tariffs

Tariff setting and indexation are regulated by the MOT. Allowable tariffs and fare increment are agreed in each individual concession contract.

For example, under the Second Stage Sri Rat Expressway Agreement and the Bang Pa-in–Pak Kret Agreement, toll rates shall be revised at every 5-year interval in accordance with changes in the consumer price index of Bangkok as announced by the Ministry of Commerce, which serves as the basis of calculation for the intrinsic value of the toll rates during the given periods under the agreements.

Depending on the type of PPP contract and/or concession agreement, revenue share scheme may be applicable, that is, when a concessionaire injects a portion of the collected revenue into the system maintenance or return to the grantor or the host government agency.

Examples of current toll rates for recently rehabilitated and constructed roads are presented in Table 11.7.

Table 11.7: Examples of Current Toll Rates for Recently Rehabilitated and Constructed Roads in Thailand

Road	Toll Type	Vehicle (4 wheels)	Vehicle (6–10 wheels)	Vehicle (>10 wheels)
Udon Rattaya Expressway	Close (baht per toll)	35–55	90–120	140–180
Sri Rat Expressway (Expressway Stage 2)	Open (baht per trip)	50	75	110
Sri Rat to Outer Ring Road Expressway (16.7 km)	Open (baht per trip)	50	75	110

km = kilometer.

Source: Expressway Authority of Thailand.

11.2.3.6 Risk Allocation

Typical risk allocation arrangements in road PPP contracts are presented in Table 11.8.

Table 11.8: Typical Risk Allocation Arrangements in Road PPP Contracts in Thailand

Risk	Private	Public	Shared	Comment
Traffic risk	✓			
Collection risk	✓			
Competition risk	✓			
Government payment risk	✓			
Environmental and social risk	✓			
Land acquisition risk		✓		
Permits	✓			
Geotechnical risk	✓			
Brownfield risk: inventories studies, property boundaries, project scope		✓		
Political risk	✓			
Foreign exchange risk	✓			

PPP = public-private partnership.

Source: Mott MacDonald.

11.2.4 Local Capabilities

Thailand has a strong pool of local private contractors with capacity and know-how to carry out most of the road/highways-related work (except for very complex bridge construction).

The Bangkok Expressway and Metro Public Company Limited (BEM) is the concessionaire for three existing PPP expressway projects in Bangkok and is the only key private operator of PPP road schemes.

Thai contractors have sufficient experience and capability to carry out general road maintenance work.

Foreign investors can still offer their expertise especially with project finance, risk management, and project management.

11.2.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	-	-	-
PPP projects that received export credit agency/international financing institution support	-	-	-

11.2.6 Challenges

Challenges of PPP progress in the road sector are shown in Table 11.9.

Table 11.9: Challenges of PPP Progress in the Road Sector in Thailand

Challenges	Currently Implemented Tackling Measures
Restriction on foreign concessionaires to enter the sector limits the competition, as the controlling stake in the project company shall belong to local companies.	
Due to political unrest in the past recent years, the implementation of PPP project has been delayed.	The new PPP law and project pipeline under the PPP strategic plan should help to reduce the number of steps in the approval and procurement process, and hence speed up the remaining PPP projects in the pipeline.
Land acquisition delays due to the decentralization of the process and objection of local resident, especially in urban areas of high population density.	Government agency can acquire land through court order. In practice, this is the last resort as this can cause conflict with local residence and create a bad reputation for the project.

PPP = public-private partnership.

Source: Mott MacDonald.

11.3 Railways

11.3.1 Regulatory Framework

11.3.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	49%	49%

11.3.1.2 Government Contracting Agency

The key contracting agencies for railway PPP projects are various government administrations and state enterprises including State Railway of Thailand and the Mass Rapid Transit Authority of Thailand (MRTA), which are both within the purview of the MOT, and the Bangkok Metropolitan Authority (BMA).

Future mass rapid transit (MRT) projects will be contracted under the MRTA, whereas rail projects, such as high-speed trains and an airport rail link, will be contracted under the State Railway of Thailand.

11.3.1.3 Sector-Specific Regulations

	2016	2017
Does the private partner have a legal right to charge users?	✓	✓

The government is in the process of developing a single ticketing system for use on the public transport network. There will be a mechanism to calculate the share of fare box revenue between different lines and/or operators. One single entry fee for each line will be introduced. The system is planned to be ready by 2018.

11.3.1.4 Sector Regulators

Since the sector still lacks an independent regulator, both the MRTA and BMA act as regulators for service performance, technical and operational standards, and tariffs.

11.3.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	✓	✓

11.3.2 Institutional Capacity for Implementation

11.3.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

Railway PPP projects are considered as priority projects in the PPP Strategic Plan 2017–2021, and a number of urban rail PPP projects, such as the Pink Line and Yellow Line monorail, have been fast-tracked in 2017. The focus has been on developing a complete network of MRT system for Bangkok and providing high-speed train services to locations outside of Bangkok that have a comparatively higher level of economic development compared to the rest of the cities or on routes that have higher commercial advantage.

The PPP pipeline of railways projects is listed in Table 11.10.

Table 11.10: PPP Pipeline of Railways Projects in Thailand

No.	Project Name	Length (km)	Value (\$ million)	Lead Agency
1	MRT Green Line (Mochit–Sapan Mai–Kookod)	19.0	1,090	MRTA
2	MRT Orange Line (east side: Thailand Cultural Station–Min Buri)	20.0	3,250	MRTA
3	MRT Orange Line (west side: Taling Chan–Thailand Cultural Station)	17.5	3,550	MRTA
4	MRT Purple Line south extension (Tao Pun–Karnjanapisek Ring Road)	23.0	3,665	MRTA
5	Phuket Mass Transit	27.0	1,125	MRTA

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Table 11.10 *continued*

No.	Project Name	Length (km)	Value (\$ million)	Lead Agency
6	Bang Na–Suvarnabhumi Airport Light Rail	18.0	800	Bangkok Metropolitan Authority
7	Monorail Grey Line	29.0	1,315	Bangkok Metropolitan Authority
8	Bangkok–Rayong High-Speed Rail	195.0	4,355	State Railway of Thailand
9	Bangkok–Hua Hin High-Speed Rail	211.0	2,860	State Railway of Thailand
10	Common ticketing system management and maintenance	–	40	Office of Transport and Traffic Policy and Planning

km = kilometer, MRT = mass rapid transit, MRTA = Mass Rapid Transit Authority of Thailand, PPP = public-private partnership.

Source: State Enterprise Policy Office. 2017. Strategic PPP Plan 2017. Public Private Partnership (PPP) in Thailand. http://www.ppp.sepo.go.th/tiny_mce/plugins/filemanager/thumbs/pipeline2560-2564Final.pdf.

11.3.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	10

11.3.2.3 Procurement

	2016	2017
PPP projects currently in procurement	n/a	–

11.3.3 Features of Past PPP Projects

11.3.3.1 PPP Projects That Reached Financial Close

	1990–2016	1990–2017	In 2017
PPP projects that reached financial close (number)	3	3	–
PPP projects that reached financial close (\$ million)	4,495	4,495	–

To date, there are three projects that reached financial close:

- Bangkok Transit System (BTS) SkyTrain operated by Bangkok Mass Transit System Corporation Limited (BTSC) on full build–transfer–operate concession basis; and
- Bangkok MRT Blue Line (as net–cost model) and Purple Line (as gross–cost model) operated by BEM. The government, through the MRTA, finances all civil works, whereas BEM is responsible for the supply of rolling stocks and electrical and mechanical systems, and subsequent operation and maintenance (O&M) in accordance with the specified service standards.

In 2017, MRTA awarded two monorail PPP projects—Pink Line and Yellow Line; however, as of the end 2017, the projects have not yet reached financial close.

11.3.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	-	-	-
PPP projects with foreign sponsor participation (as a share to the total number of rail PPP projects)	-	-	-

11.3.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	2	2	-
Government guarantees	no data	no data	-
Availability-/performance-based payment basis	1	1	-

For all the three projects, the government has provided the land, whereas for two of the projects, the government invested in all civil infrastructure (i.e., stations and facilities, tunnels, ventilation systems, and trackwork).

11.3.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	2	2	-
Government-paid contracts	1	1	-

	2016	2017
What additional revenue streams are allowed?		
Land use development rights (transit-oriented development)	✓	✓
Advertising	✓	✓
Track access charges	✗	✗

Having additional revenue from transit-oriented development and advertising is a common practice in Thailand. For example, the concessionaire for the MRT Blue Line and Purple Line has the exclusive right to collect fare box revenue and undertake activities and commercial development, including advertising, leasing space, and telecommunications services in the metro stations and in the trains. For the Blue Line contract, which is on a net-cost basis, the concessionaire is obliged to share fare box and commercial development revenues with the MRTA at the rates agreed in the contract. For the Purple Line contract, which is on gross-cost basis, the MRTA is entitled to all fare box and commercial development revenues from the utilization of the civil infrastructure and the railway systems, and the MRTA makes repayments to the concessionaire in the form of service fees.

11.3.3.5 Tariffs

Fares setting and indexation mechanism is stated in a concession contract as agreed with the governing agencies (BMA and MRTA), and normally, their approval is required before adjusting system fares.

For example, the BTSC's concession contract provided automatic tariff indexation for normal levels of inflation in 5% increments. The following events would also trigger a full fare renegotiation (Mandri-Perrott 2010):

- changes in inflation greater than $\pm 9\%$ in one 12-month period;
- fluctuation in exchange rate greater than $\pm 10\%$ from the base case specified in the concession contract;
- changes in the interest rate on local and foreign debt by $\pm 10\%$ from the base case specified in the concession contract;

- substantial increases in electricity costs to BTSC;
- major investments in excess of the originally agreed scope of work; and
- other exceptional events (e.g., force majeure and macroeconomic shocks).

Under the terms of the concession contract, the BTSC required BMA's approval. The system's current fare structure is zone-based, with options for monthly passes.

The MRT Blue Line and Purple Line concession contracts allow fares to be adjusted every 2 years based on the actual changes of the Bangkok Non-Food Consumer Price Index compared to the basic reference fare rates.

Distance-based fares are applied in Thailand.

Current fare rates for Bangkok Metro are presented in Table 11.11.

Table 11.11: Current Fare Rates for Bangkok Metro, 2017
(B)

Line/No. of Stations	1	2–7	2–11	8–15	12–17
Bangkok Transit System Sky Train	16	23–40		44–59	
MRT Blue Line and Purple Line	16		19–39		42

MRT = mass rapid transit.

Note: Rates are as of the end of 2017.

Source: BTS Sky Train. http://www.bts.co.th/customer/th/02-route-current_new.aspx; Bangkok Metro.

11.3.3.6 Risk Allocation

Typical risk allocation arrangements in railways PPP contracts are shown in Table 11.12.

Table 11.12: Typical Risk Allocation Arrangements in Railways PPP Contracts in Thailand

Risk	Private	Public	Shared	Comment
Demand risk	✓			There has been only one case when the public sector took the demand (passenger volume) risk—MRT Purple Line, which was awarded on gross-cost basis. Generally, the tendency in the government is to pass the risk to the concessionaire.
Revenue collection risk	✓			
Tariff risk			✓	Section 11.3.3.5.

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Table 11.12 *continued*

Risk	Private	Public	Shared	Comment
Competition risk	✓			
Government payment risk	✓			
Environmental and social risk			✓	
Land acquisition risk		✓		
Utilities relocation risk			✓	Private partner bears the risk of cost overrun associated with relocating public utilities up to a specified threshold.
Interface with other transport	✓			
Permits	✓			
Geotechnical risk	✓			
Regulatory risk		✓		
Political risk	✓			
Foreign Exchange risk			✓	
Early termination risk			✓	

MRT = mass rapid transit, PPP = public-private partnership.

Sources: Mott MacDonald; C. Mandri-Perrott. 2010. *Private Sector Participation in Light Rail-Light Metro Transit Initiatives*. The International Bank for Reconstruction and Development / The World Bank.

11.3.4 Local Capabilities

Thailand has a strong pool of local private contractors with capacity and know-how to carry out most of the railway/metro-related work. Rolling stock has been provided by international companies.

There are two major local operators: BTSC and BEM.

Foreign investors can still bring value and offer their expertise especially with project finance, risk management, and project management.

11.3.5 Challenges

Challenges of PPP progress in the railway sector are shown in Table 11.13.

Table 11.13: Challenges of PPP Progress in the Railway Sector in Thailand

Challenges	Currently Implemented Tackling Measures
Restriction on foreign concessionaires to enter the sector limits the competition, as the controlling stake in the project company shall belong to local companies	
Due to political unrest in the past recent years, the implementation of PPP project has been delayed.	The new PPP law and project pipeline under PPP strategic plan should help to reduce the number of steps in the approval and procurement process and hence, speed up the completion of the remaining PPP projects in the pipeline.
Bankability issues due to very high investment cost coupled with high uncertainties in ridership estimate and the intention of the government to pass demand risk to the private sector	
Due to the poor integration of urban rail with other modes of transport, ridership remains below its potential level. Many of these problems resulted from a lack of cooperation and coordination between government agencies that run the different aspects of the Bangkok transportation network.	Future PPP projects are intended to be under supervision of a single ministry—Ministry of Transport, which controls all modes of transport. The government plans to implement single ticketing system for use on public transport network.
Land acquisition delays due to the decentralization of the process and objection of local residents, especially in urban areas of high population density	Government agencies can acquire land through court order. In practice, this is the last resort as this can cause conflict with local residents and create bad reputation for the project.

PPP = public–private partnership.

Source: Mott MacDonald.

11.4 Ports

11.4.1 Regulatory Framework

11.4.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	49%	49%

The Foreign Business Act stipulates that a port operator must either be a Thai national or a company with at least 51% Thai equity and must comply with the Port Authority of Thailand Act B.E. 2494 (1951). Business activities with varying foreign ownership ceilings are shown below.

The maximum allowed foreign ownership for defined activities is presented in Table 11.14.

Table 11.14: Maximum Allowed Foreign Ownership for Defined Activities in Thailand

Business Activity	Maximum Percentage Allowed
International shipping services	49%
Domestic shipping services	30%
Port/terminal operator	49%
Specific services	100% subject to authorization of the Minister of Transport, for a period of 1 year, if domestic vessels are not available.

Source: World Trade Organization. 2016. *Trade Policy Review: Thailand*. WT/TPR/S/326 Rev. 1 pp. 1–151 [Online]. Available at www.docs.wto.org.

11.4.1.2 Government Contracting Agency

The Ministry of Transport and Communications (MOTC) is responsible for formulating policies for the transport sector and is competent to enter into PPP contracts.

The Industrial Estate Authority of Thailand, a state-owned enterprise under the Ministry of Industry, is responsible for ports in the Map Ta Phut Industrial Estate and has granted concessions to the private sector for the operation of liquid chemical and general freight terminals within the industrial estate.

The Government of Thailand has policies to promote private participation within the port sector. The principal policy, to privatize the Port Authority of Thailand (PAT), has not made much progress and is awaiting guidance and direction from the government. The private sector can participate in public ports as well as private ports, either by operating the existing facilities or funding the development of and operating the new or additional facilities. Port operators are, however, required to fulfill technical requirements to receive permission and permits (issued by competent authorities) for the development, construction, and operation of ports.

11.4.1.3 Sector-Specific Regulations

Port sector regulations are issued in the form of ministerial notifications by the MOTC and the Marine Department's Regulations. For example, the MOTC's Ministerial Notification on Approval of Port Operation sets out the criteria and approval process for port operators to obtain licenses or concessions.

The Marine Department, under the MOTC, is responsible for the promotion and development of maritime transport. It is also in charge of law enforcement, navigation safety, ship registration and inspection, maintenance of navigation channels, providing pilotage services for seagoing vessels, and minimizing the environmental impact caused by navigation and port activities.

11.4.1.4 Sector Regulators

There is no independent regulator for ports in Thailand. The state-owned PAT, under the general supervision of the MOTC, carries out certain regulatory functions. Operating within the port sector, the PAT is conducting business for the interest of the state and the public. The PAT is further responsible for the development and management of all major ports in Thailand.

At present, five major ports are under the direct control of the PAT: Bangkok Port, Laem Chabang Port, Ranang Port, Chieng Sean Port, and Chien Kong Port. Only the Laem Chabang Port implements a landlord port model. The PAT can make decisions on appropriate management and operations of each port under its control, provided that such decisions must correspond to the PAT's work objectives as stipulated by the act.

The Port Authority of Thailand Act B.E.2494 (1951), as amended by the Act B.E.2551 (2008), listed the following work activities to be carried out by the PAT (Table 11.15).

Table 11.15: Port Sector Regulatory Agencies in Thailand

Agency	Function
Port Authority of Thailand (PAT)	Constructs, purchases, acquires, disposes of, hires, lets, and operates port equipment, services, and facilities
	Purchases, acquires, leases, hires, lets, owns, possesses, disposes of, or operates movable and immovable properties
	Determines charges for the use of its ports, services, and facilities, and issues regulations regarding the method of payment of such charges
	Issues regulations regarding safety, and the use of its ports services and facilities
	Borrows money
	Dredges and maintains channels in the authority area
	Controls, develops, and provides facilities and safety in port undertakings and navigation in the authority area
	Fixes the rates of various dues and charges within the authority area
	Issues bonds or any other instruments for the purpose of investment

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Table 11.15 *continued*

Agency	Function
	Forms a limited company or a limited public company for the conduct of port undertakings and other businesses within the scope of the objectives of the PAT, provided that shares of all the said limited company or limited public company shall be held by aliens as defined by the law on alien business in the amount not exceeding 49% of its registered capital
	Forms a joint venture with other parties or to hold shares of a limited company or a limited public company for the benefit of the businesses of the PAT

Source: Port Authority of Thailand Act, B.E. 2494 (1951) as amended until Port Authority of Thailand Act (No.5), B.E. 2551 (2008).

11.4.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Engineering procurement and construction contract	x	x

There are currently no standardized PPP model or standard concession agreement templates available for port projects in Thailand.

11.4.2 Institutional Capacity for Implementation

11.4.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

Ports PPP projects are considered priority in the PPP Strategic Plan 2017–2021. The PPP pipeline of maritime projects is shown in Table 11.16.

Table 11.16: PPP Pipeline of Maritime Projects in Thailand

No.	Project Name	Responsible Agency	Value (\$ million)
1	Laem Chabang Port Phase 3	Port Authority of Thailand under MOT	4,040
2	Pak Bara Seaport	Marine Department under MOT	585
3	Second Songkhla Deep-Sea Port	Marine Department under MOT	470
4	Map Ta Phut Industrial Port Phase 3	IEAT under MOI	285
5	Project for managing public ports #2	IEAT under MOI	85
6	Project for managing public ports for transfer of liquid goods	IEAT under MOI	370
7	Samui Cruise Terminal	Marine Department under MOT	155
8	Bangkok Port Development Project ^a	Port Authority of Thailand under MOT	n/a
9	Sattahip Commercial Port	Royal Thai Navy under MOD	n/a

IEAT = Industrial Estate Authority of Thailand, MOD = Ministry of Defense, MOF = Ministry of Finance, MOI = Ministry of Industry, MOT = Ministry of Transport, PPP = public-private partnership.

^a Proposed financing method not yet identified.

Sources: State Enterprise Policy Office. 2017. Strategic PPP Plan 2017. Public Private Partnership (PPP) in Thailand. <http://www.ppp.sepo.go.th/tinymce/plugins/filemanager/thumbs/pipeline2560-2564Final.pdf>; Eastern Economic Corridor (EEC) Development Plan. <http://www.eeco.or.th/en>; PAT. 2017. PAT News. Issue 42. March. http://www1.port.co.th/news_/patnews/file_att/lhkbfxgaaxfcw/file_lhkbfxgaaxfcw.pdf.

11.4.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	9

11.4.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	no data	no data	no data
Unsolicited bids	-	-	-

	1990– 2016	1990– 2017	In 2017
Competitive bidding process	no data	no data	no data
PPP projects currently in procurement	n/a	n/a	-

11.4.3 Features of Past PPP Projects

11.4.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	8	8	-
PPP projects that reached financial close (\$ million)	200	200	-

Seven of eight past PPP projects that reached financial close were various agribulk, domestic, and container terminals in Laem Chabang Port. The brownfield to greenfield ratio is 1:1. The concession period for the terminals varied from 25 to 30 years.

11.4.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	5	5	-
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	63%	63%	-

11.4.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	-
Government guarantees	no data	no data	-
Availability-/performance-based payment basis	-	-	-

11.4.3.4 Payments Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	-	-	8
Government-paid contracts	-	-	-
What additional revenue streams are allowed?			
Land use development rights		no data	
Wharf charge		no data	
Navigation charge		no data	
Pilotage charge		no data	
Channel access charge		no data	

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	8	8	-
Government-paid contracts	-	-	-

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	no data	no data
Wharf charge	no data	no data
Navigation charge	no data	no data
Pilotage charge	no data	no data
Channel access charge	no data	no data

11.4.3.5 Concession Fees

No information available.

11.4.3.6 Tariffs

	2016	2017
Does the private sector have the freedom to set the tariff?	no data	no data

Terminal handling charges (THCs) are charges made by the terminal operators in respect of container movements services performed at a terminal. For container terminals, THCs cover the movement of a container between the ship's hold and the exit-entry gate via the container terminal yard. Table 11.17 gives a general indication of the destination THCs for a full container load as charged by the relevant terminal operator, port authority, and/or shipping line.

Table 11.17: Typical Terminal Handling Charge in Thailand
(B)

Designation	Company	Year	Terminal Handling Charge	
			Twenty-foot equivalent unit	Forty-foot equivalent unit
Shipping line	MOL	2018	2,800	4,300
Shipping line	MCC	2018	2,800	4,300

Source: Various as published by companies.

Actual THCs may vary from port to port of each country, as the cost of handling depends on the contractual agreement between terminal operators and the relevant shipping line.

11.4.3.7 Labor

	2016	2017
How is the issue of excess and efficiency of labor force typically being resolved?	no data	no data
Private operator given the freedom to hire and fire and to set its own terms and conditions of employment	no data	no data
The pre-PPP workforce is transferred to the private operator. Private operator is allowed to make gradual changes to the terms and conditions of employment, provided these are no worse than before and/or are acceptable to the unions or workers' representatives.	no data	no data
The port authority or the government undertakes a major labor force restructuring in advance of the PPP, and the workforce is transferred to the private operator.	no data	no data

Minimum national crew requirements are in place to provide work opportunities for the people of Thailand.

11.4.3.8 Risk Allocation

No information available.

11.4.4 Local Capabilities

The World Trade Organization Trade Policy Review of 2015 notes that Thailand has a reasonable commercial shipping fleet comprised of 474 vessels (in 2014) and has a total of 122 terminal operators. Most ports are government-owned but operated by international private sector operators. The main ports of Laem Chabang and Bangkok are used for both imports and exports of containers, bulk cargo, and other large shipments. Inland waterways are used for domestic and international transport.

The local shipbuilding industry in Thailand is small with limited capacity, with activities mainly focused on ship repair and conversion rather than shipbuilding. Thailand has a reasonable local stevedoring capacity. Marine construction and dredging works for major projects are typically carried out by international companies.

11.4.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	no data	no data	–
PPP projects that received export credit agency/international financing institution support	–	–	–

11.4.6 Challenges

Challenges of PPP progress in the port sector are shown in Table 11.18.

Table 11.18: Challenges of PPP Progress in the Port Sector in Thailand

Challenges	Currently Implemented Tackling Measures
Restriction on foreign port operators on equity as the controlling stake in the project company shall belong to local companies	
Lack of independent port regulator	
Slow privatization process of existing port facilities	
Historic dominance of the PAT, a state entity, in developing and managing port projects.	

PAT = Port Authority of Thailand, PPP = public–private partnership.

Source: Mott MacDonald.

11.5 Energy

11.5.1 Regulatory Framework

11.5.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Power generation	100%	100%
Power transmission	100%	100%
Power distribution	100%	100%
Oil and gas	100%	100%

11.5.1.2 Government Contracting Agency

Electricity Generating Authority of Thailand (EGAT), a state-owned, vertically integrated utility, plays a key role in electricity generation and transmission in the Thai power sector. EGAT owns approximately 45% of Thailand's total generation capacity and has the exclusive rights to purchase electricity produced by independent power producers (IPPs) and small power producers,⁴ and to sell it to the two distribution companies. Although the Energy Regulatory Commission regulates power purchases, the ultimate authority for setting policy on power sector procurement lies with the National Energy Policy Council (NEPC), and so EGAT's monopoly on power purchases ultimately derives from that authority. The NEPC is composed of the Prime Minister as chair; a deputy prime minister designated by the Prime Minister as vice chair; the ministers for energy, transport, interior, defense, foreign affairs, finance, and agriculture; and the secretary-general of the NEPC.

The Metropolitan Electricity Authority (MEA) engages in the distribution of electricity in Thailand. The company supplies electricity to customers in Bangkok, Nonthaburi, and Samut Prakarn which, together, account for two-thirds of Thailand's electricity demand. MEA owns no generation itself, but instead purchases from EGAT or directly from very small power producers.⁵ It is, however, directly responsible for the high-voltage distribution network within its service territory and is involved in the design, installation, and maintenance of high-voltage and low-voltage electrical systems.

The Provincial Electricity Authority is responsible for generation, procurement, distribution, and sale of electricity to the public, business, and industrial sectors in 74 provinces, over a nationwide area of 510,000 square kilometers or 99.4% of Thailand. It does not own or control

⁴ Generators from 10 megawatts (MW) to 90 MW.

⁵ Generators above or below 10 MW.

any of the high-voltage lines within its service territory. As with MEA, responsibility for oversight of the Provincial Electricity Authority falls to the Ministry of Interior.

11.5.1.3 Sector-Specific Regulations

The regulatory framework for the Thai energy sector was reformed in December 2007 with the passage of the Energy Industry Act 2007. The act established the principles of the regulatory framework for the power and gas sectors, and the institutional arrangements for the separation of policy and regulation. The establishment of the Energy Regulatory Commission was one of its cornerstones.

The act is impressive in its scope and comprehensiveness. In addition to covering important aspects of the power and natural gas sectors, such as the issuance of licenses and the setting of tariffs, the act explicitly calls for the full utilization and development of renewable sources of energy, with a particular emphasis on reducing the reliance on imports.

The Energy Regulatory Commission and EGAT (with approval from the Energy Regulatory Commission) also issue sector-specific regulations such as those concerning the purchase of power from power producers.

11.5.1.4 Sector Regulators

Energy sector regulatory agencies are shown in Table 11.19.

Table 11.19: Energy Sector Regulatory Agencies in Thailand

Agency	Function
Ministry of Energy	Its primary responsibility is to develop policies related to the electricity sector. The ministry is the principal actor in the governance of the energy sector. It drafts and proposes all policies related to energy, including electric power and renewable energy policies.
National Energy Policy Council (NEPC)	Consists of the Prime Minister as chair; a deputy prime minister designated by the Prime Minister as vice chair; the ministers for energy, transport, interior, defense, foreign affairs, finance, and agriculture; and the secretary-general of the NEPC; devises the National Energy Policy and the National Energy Management and Development Plan
Energy Policy and Planning Office	Recommends energy policies, including the Power Development Plan, energy management, and development plans of the country
Department of Mineral Fuel	Grants concessions, regulates, and facilitates international cooperation for oil and gas exploration and production, and aims to enhance gas supply security

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Table 11.19 *continued*

Agency	Function
Department of Alternative Energy Development and Efficiency	Promotes clean and renewable energy production and use, the commercialization of clean energy technology, and energy conservation
Department of Energy Business	Grants licenses for oil and gas trading, storage stockpiling and transport, controls safety standards, and defines and controls oil and gas quality standards
Energy Regulatory Commission	<p>This is a regulatory agency established in 2008 under the Energy Industry Act of 2007. It operates separately from the Ministry of Energy and other government departments, but works within the policy framework of the NEPC. The Energy Regulatory Commission has the following functions:</p> <ul style="list-style-type: none"> • regulates energy industry operations, compliant with the Energy Act and policies; • issues operational licenses for the energy industry; • ensures the reliability and security of power system; • establishes regulations and criteria for power purchases; • provides an opinion on energy and power development plans; • promotes energy efficiency and the use of clean and renewable energy; • approves the electricity tariff; • sets standards for safety in energy industry operations; • oversees energy network systems and operators; • protects energy consumer; and • sets the pipeline tariff for natural gas.
Ministry of Finance	This ministry plays a key role in the power sector, as it must approve all public electricity-related investment projects.
Ministry of Interior	This ministry is involved in the energy sector as state-owned enterprises are established under its authority and regulated by it. The development of the provincial electricity sector used to be under the authority of the Ministry of Interior.
Ministry of Industry	Involved in the electricity sector as it supervises and coordinates the activities of industrial business operations, including power generation, by applying the guidelines on environmental protection, safety, hygiene, and energy efficiency
ONEP under the Ministry of Natural Resources and Environment	For large-scale projects that will cause significant impacts, the EIA reports must be submitted to the ONEP to be considered and give recommendations to permitting agencies or cabinet. EIA reports have to be prepared by a consulting firm which is registered by ONEP.

EIA = environmental impact assessment, ONEP = Office of Natural Resources and Environmental Policy and Planning.

Source: Mott MacDonald.

11.5.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
Power purchase agreement	✓	✓
Capacity take-or-pay contract	✓	✓
Fuel supply agreement	✓	✓
Transmission and use of system agreement	✓	✓
Engineering procurement and construction contract	✓	✓

11.5.2 Institutional Capacity for Implementation

11.5.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	n/a	n/a

Government institutions and related agencies have developed the following key development plans to support project planning:

- Power Development Plan 2015–2036 (PDP2015),
- Alternative Energy Development Plan 2015–2036 (AEDP2015),
- Thailand Smart Grid Development Master Plan 2015–2036, and
- Energy Efficiency Plan 2015–2036.

The PDP2015 and AEDP2015 are the key strategies to set the target for Thailand's energy future. The PDP2015 details a 21-year investment strategy for the power sector, including the types of generation to be developed and a detailed schedule for development. The PDP2015 aims to increase generation capacity for both coal-fired and renewable energy. The plan also includes nuclear development, though only at the end of the plan, as nuclear development is not feasible at present. Thailand expects that future demand growth will be relatively strong, with the need to replace approximately 27 gigawatts (GW) of capacity that is expected to retire over the time frame of the PDP2015 (in 2036).

The AEDP2015 targets 30% of final energy consumption from renewable energy sources and 20 GW of installed capacity by the end of 2036. The total planned capacity of renewable energy under AEDP2015 is detailed below:

- Solar—6,000 megawatts (MW);
- Wind—3,002 MW;
- Hydro (domestic)—3,282 MW;
- Hydro (more than 15 MW)—2,906 MW;
- Hydro (up to 15 MW)—376 MW;
- Biomass—5,570 MW;
- Biogas—1,280 MW; and
- Waste to energy—550 MW.

Unlike previous renewable energy plans, AEDP2015 establishes priorities for renewable energy support or the so-called merit order for renewable power generation. The merit order ranges from the highest priority to the lowest:

- priority no. 1 (the highest)—waste to energy,
- priority no. 2—biomass,
- priority no. 3—biogas from waste/wastewater,
- priority no. 4—micro hydro,
- priority no. 5—biogas from energy crops,
- priority no. 6—wind,
- priority no. 7—solar photovoltaic, and
- priority no. 8—geothermal.

11.5.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	3

11.5.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	11	11	–
Unsolicited bids	2	3	1
Competitive bidding process	10	10	–

	1990– 2016	1990– 2017	In 2017
License scheme	25	26	1
PPP projects currently in procurement	n/a	n/a	2

The data on the type of procurement for the past projects are not exhaustive.

11.5.3 Features of Past PPP Projects

11.5.3.1 PPP Projects That Reached Financial Close

	1990–2016		1990–2017		In 2017	
	Number	\$ million	Number	\$ million	Number	\$ million
PPP projects that reached financial close	113	23,331	117	24,744	4	1,413
<i>Renewable energy generation:</i>	69	5,409	72	6,704	3	1,295
Solar	35	2,177	35	2,177	-	-
Wind	10	1,324	10	1,324	2	1,259
Hydro	2	1,285	2	1,285	-	-
Geothermal	-	-	-	-	-	-
Waste/biomass	22	624	23	661	1	37
<i>Thermal energy generation:</i>	44	17,922	45	18,040	1	118
Coal	6	2,649	6	2,649	-	-
Diesel	5	656	5	656	-	-
Natural gas/Co-generation	33	14,617	34	14,735	1	118

In Thailand, a long-term concession agreement between the relevant government authority and an investor is seen as a common feature of almost all project financing. The most common structures for project financing are as follows:

- Build–own–operate,
- Build–transfer–operate, and
- Build–operate–transfer.

11.5.3.2 Foreign Investor Participation

	1990–2016		1990–2017		In 2017	
	Number	Share of the total number of projects	Number	Share of the total number of projects	Number	Share of the total number of projects
PPP projects with foreign sponsor participation	39	35%	39	33%	-	-
Renewables	13	19%	13	18%	-	-
Thermal	26	59%	26	58%	-	-
Energy transmission and distribution	-	-	-	-	-	-

11.5.3.3 Government Support

	1990–2016	1990–2017	In 2017
PPP projects that received government support:			
Viability gap fund	2	2	no data
Government guarantees	52	52	no data
Availability-/performance-based payment basis	113	117	4

11.5.3.4 Payment Mechanism

	1990–2016	1990–2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	-	-	-
Government-paid contracts	113	117	4

11.5.3.5 Tariffs

Is there a system of feed-in tariffs (FIT)?		✓
Typical FIT levels	Type	B/kilowatt-hour (kWh)
Adding B0.5/kWh as premium FIT for southern provinces.	Wind	6.06
Adding B0.5/kWh as premium FIT for southern provinces.	Hydro (<200 kW)	4.90
Dependent of capacity from less than 1 MW to higher than 3 MW. Adding B0.3–B0.5/kWh as premium FIT for southern provinces.	Biomass	4.24–5.34
Adding B0.5/kWh as premium FIT for southern provinces. Rate is dependent on the resource of production either from wastewater or energy crops.	Biogas	3.76–5.34
Adding B0.5–B0.7/kWh as premium FIT for southern provinces. Rate is dependent on the resource of production either from incineration, gasification, or landfill gas.	Waste	5.60–6.34
Adding B0.5/kWh as premium FIT for southern provinces. Rate is dependent on the types (residential or commercial rooftop) and capacity (<10, <250, or <1,000 kWp) of power generation.	Solar PV	6.01–6.85

kWp = kilowatt-hour, MW = megawatt, PV = photovoltaic.

Sources: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). 2015. *Thailand: Renewable Energy Policy Update—New Power Development Plan Announced in May (Status May 2015)*. http://www.thai-german-cooperation.info/download/20150520_pdp_re_%20policy%20factsheet.pdf; Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). 2015. *Thailand: Solar PV Policy Update 10/15*. <http://www.thai-german-cooperation.info/admin/uploads/publication/4d7cfa71790aff2290d5acb161d41914en.pdf>.

The feed-in tariff (FIT) will be granted for 20 years, except for power systems fueled by landfill gas which will receive support for 10 years only.

The new FIT is composed of three components: $FIT = FIT(F) + FIT(V) + FIT \text{ Premium}$.

FIT(F) is a portion of the remuneration that is fixed throughout the whole support period, whereas FIT(V) is a portion that varies according to the inflation rate. The FIT(V) rates were fixed for projects that dispatch electricity to the grid in 2017 (FIT[V2017]), after that the FIT(V) will be revised on an annual basis in accordance with the core inflation to reflect actual feedstock costs. The last component is the FIT Premium, which is again split into two categories, the bioenergy for the first 8 years of project lifetime, and for very small power producers located in three southern border provinces and four districts of Songkla Province (i.e., Chana, Thepa, Saba Yoi, and Na Thawi).

11.5.3.6 Risk Allocation

Typical risk allocation arrangements in energy PPP contracts are shown in Table 11.20.

Table 11.20: Typical Risk Allocation Arrangements in Energy PPP Contracts in Thailand

Risk	Private	Public	Shared	Comment
Demand risk		✓		
Revenue collection risk				n/a
Tariff risk			✓	Typically the private sector with contract provisions for negotiation. For large gas-fired IPPs, the tariff is fixed for 25 years.
Government payment risk				n/a
Environmental and social risk	✓			
Land acquisition risk	✓			
Permits	✓			
Handover risk	✓			
Political risk	✓			
Regulatory risk	✓			
Interconnection risk			✓	
Grid performance risk			✓	
Hydrology risk	✓			

PPP = public-private partnership.

Source: Mott MacDonald.

11.5.4 Local Capabilities

Investment opportunity in the renewable energy market is mainly dependent on the AEDP2015, which has set fixed tariffs and target for electricity generation from renewable energy resources. The fixed tariff scheme has been attracting a number of players, including new entry up to large nonrenewable firms, into renewable energy generation market as it offers financial certainty incentives. A number of large and small projects have been developed successfully and have become very familiar to financial institutions. Presently, the market has reached the maturity stage, as evidenced by the introduction of bidding scheme in the southern provinces, lower incentives, and new investment channels such as the solar cooperation program. This is very challenging in terms of returns for the local players.

11.5.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	36	36	–
PPP projects that received export credit agency/international financing institution support	12	12	–

Data on debt providers are not exhaustive.

11.5.6 Challenges

There is limited information available on past project failures. Challenges of PPP progress in the energy sector are provided in Table 11.21.

Table 11.21: Challenges of PPP Progress in the Energy Sector in Thailand

Challenges	Currently Implemented Tackling Measures
A bidding scheme has been introduced for renewable generation as the market becomes more competitive, which has led to lowering of tariffs, and, as a result, lower returns to investors.	
Many renewable energy projects have been developed only in certain provinces of Thailand where there are available resources (e.g., land, irradiation, raw materials, and wind). This creates “hot spot” regions of concentrated intermittent renewable power generation that congests the current transmission and distribution network. This leads to challenges to investors, such as inability to develop further projects, as the grid operator will not allow more generators to connect, and risk that existing projects cannot export all potential generated power, due to grid capacity constraints.	
Private sector power project developers take the risk of grid unavailability under the standard form of power purchase agreement. However, the risk of grid unavailability is managed by the state-owned utility companies, and public data are not available for private sector developers to assess project-specific implications of grid infrastructure status, loading, and development plans. Such uncertainty has the potential to undermine investor confidence.	

Source: Mott MacDonald.

11.6 Water and Wastewater

11.6.1 Regulatory Framework

11.6.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Bulk water supply and treatment	49%	49%
Water distribution	49%	49%
Wastewater treatment	49%	49%
Wastewater collection	49%	49%

11.6.1.2 Government Contracting Agency

The key contracting agencies for water and wastewater PPP projects are various government administrations and state enterprises such as Bangkok Metropolitan Authority (BMA) under the Ministry of Interior (for projects in Bangkok) and Wastewater Management Authority under the Ministry of Natural Resources and Environment (for projects outside of Bangkok). Most wastewater systems in the country are managed by local governments and municipalities under the Ministry of Interior.

11.6.1.3 Sector-Specific Regulations

	2016	2017
Can the private sector be given water abstraction rights?	✓	✓
Are there regulations in place on raw water extraction?	✓	✓
Are there regulations in place on the release of treated effluents?	✓	✓

11.6.1.4 Sector Regulators

Water sector regulatory agencies in Thailand are described in Table 11.22.

Table 11.22: Water Sector Regulatory Agencies in Thailand

Agency	Function
Ministry of Natural Resources and Environment (MNRE)	General governing body overseeing performance of water and wastewater-related projects
Department of Water Resources (under MNRE)	Monitors and controls water extraction for water supply treatment projects
Department of Groundwater Resources (under MNRE)	Monitors and controls groundwater extraction for water supply treatment project
Wastewater Management Authority (under MNRE)/local governments and municipalities	Monitors and controls discharge of wastewater and manages projects outside of Bangkok
Bangkok Metropolitan Authority under Ministry of Interior	Monitors, controls, and manages projects in Bangkok

Source: Mott MacDonald.

11.6.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	no data	no data
Performance-based operation and maintenance contract	no data	no data
Engineering procurement and construction contract	✓	✓

11.6.2 Institutional Capacity for Implementation

11.6.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	no data	no data
Is there a PPP project pipeline developed and available?	✓	✓

The PPP Strategic Plan 2017–2021 puts emphasis on wastewater PPP projects. The PPP pipeline of water projects is listed in Table 11.23.

Table 11.23: PPP Pipeline of Water Projects in Thailand

No.	Project Name	Responsible Agency	Value (\$ million)
1	Khlong Toei Wastewater Management	Bangkok Metropolitan Administration	535
2	Thonburi Wastewater Management	Bangkok Metropolitan Administration	395
3	Nong Bon Swamp Wastewater Management	Bangkok Metropolitan Administration	305
4	Upgrade of Wastewater Collection and Treatment System for Rom Klao Municipality	Bangkok Metropolitan Administration	45
5	Wastewater Management in Samut Sakhon City Municipality	Wastewater Management Authority under Ministry of Natural Resources and Environment	185
6	Wastewater Management in Krathumbaen Municipality	Wastewater Management Authority under Ministry of Natural Resources and Environment	90
7	Wastewater Management in Bang Bua Thong Municipality	Wastewater Management Authority under Ministry of Natural Resources and Environment	132
8	Wastewater Management in Rangsit City Municipality	Wastewater Management Authority under Ministry of Natural Resources and Environment	13

Source: State Enterprise Policy Office. 2017. Strategic PPP Plan 2017. Public Private Partnership (PPP) in Thailand. http://www.ppp.sepo.go.th/tiny_mce/plugins/filemanager/thumbs/pipeline2560-2564Final.pdf.

11.6.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	8

11.6.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	no data	no data	-
Unsolicited bids	-	-	-
Competitive bidding process	3	3	-
PPP projects currently in procurement	n/a	n/a	-

The data on the type of procurement for the past projects are not exhaustive.

11.6.3 Features of Past PPP Projects

11.6.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	15	15	-
PPP projects that reached financial close (\$ million)	969	969	-

11.6.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	7	7	-
PPP projects with foreign sponsor participation (as a share to the total number of water PPP projects)	46%	46%	-

11.6.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	-
Government guarantees	6	6	-
Availability-/performance-based payment basis	3	3	-

11.6.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	3	3	-
Government-paid contracts	3	3	-

11.6.3.5 Tariffs

The local water authority, metropolitan area, and provincial area are responsible for setting the water supply tariff.

The domestic water tariff for the Metropolitan Water Authority is presented in Table 11.24.

Table 11.24: Domestic Water Tariff for Metropolitan Water Authority in Thailand, Effective from December 1999

Volume (m ³)	Cost (\$/m ³)
1–30	0.241 (not less than \$1.278)
31–40	0.285
41–50	0.294
51–60	0.303
61–70	0.313
71–80	0.322

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Table 11.24 *continued*

	Volume (m ³)	Cost (\$/m ³)
	81–90	0.355
	91–100	0.364

m³ = cubic meter.

Source: Metropolitan Waterworks Authority <https://www.mwa.co.th/> (accessed 20 February 2018).

11.6.3.6 Risk Allocation

The typical risk allocation arrangements in water PPP contracts are presented in Table 11.25.

Table 11.25: Typical Risk Allocation Arrangements in Water PPP Contracts in Thailand

Risk	Private	Public	Shared	Comment
Demand risk		✓		Projects have typically been developed as bulk water build–operate–transfer projects.
Revenue collection risk		✓		The public sector is typically offtaker and is responsible for distribution and tariff collection.
Tariff risk		✓		In principle, tariffs are set with pass through of costs through indexing.
Government payment risk	✓	✓		Public, if government payment guarantee is provided
Environmental and social risk	✓			The private sector is responsible for obtaining Environmental Impact Assessment approvals.
Land acquisition risk		✓		The public sector typically provides project land.
Interface risk			✓	
Handover risk	✓			
Political risk			✓	
Foreign exchange risk	✓			

PPP = public–private partnership.

Source: Mott MacDonald.

11.6.4 Nonrevenue Water and Infiltration

Nonrevenue water (%)	25% in Bangkok 30%–40% elsewhere
Nonrevenue water (m³/km/day)	no data
Infiltration	no data

m³/km/day = cubic meter per kilometer per day.

Source: Asia Infra. July 2015. Percentage Reduction Nonrevenue Water and Infiltration.

11.6.5 Local Capabilities

Several domestic conglomerates have entered the water sector to take contractual responsibility for investor–civil contractor–operator functions. Some consortia have had international equity participation. Process design, mechanical, electrical, instrumentation, control, and automation functions have typically been provided by international firms with local representation, such as Degremont or Ebara.

11.6.6 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	no data	no data	–
PPP projects that received export credit agency/international financing institution support	2	2	–

11.6.7 Challenges

Challenges of PPP progress in the water sector are provided in Table 11.26.

Table 11.26: Challenges of PPP Progress in the Water Sector in Thailand

Challenges	Currently Implemented Tackling Measures
Restriction on foreign concessionaires to enter the sector limits the competition, as the controlling stake in the project company shall belong to local companies.	

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Table 11.26 *continued*

Challenges	Currently Implemented Tackling Measures
Due to political unrest in recent years, the implementation of PPP projects has been delayed.	The new PPP law and project pipeline under PPP strategic plan should help to reduce these unnecessary steps in the approval and procurement process and, hence, speed up remaining PPP projects in the pipeline.
A demarcation of responsibilities between Metropolitan Waterworks Authority and Bangkok Metropolitan Authority dilutes Thailand's institutional capacity and reduces the opportunity to achieve synergies in procurement and service provision.	
Current international perceptions of procurement capacity and procurement practices impede international appetite to tender in this market.	

PPP = public-private partnership.

Source: Mott MacDonald.

11.7 Information and Communication Technology

11.7.1 Regulatory Framework

11.7.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects		
Fixed line infrastructure	49%	49%
Fixed line services	49%	49%
Wireless/mobile infrastructure	49%	49%
Wireless/mobile services	49%	49%

11.7.1.2 Government Contracting Agency

The Ministry of Digital Economy and Society is the government department managing various agencies and state-owned enterprises including the National Statistical Office of Thailand, the Thai Meteorological Department, the Electronic Transactions Development Agency, Thailand Post Company Limited, TOT (Telephone Organization of Thailand) Public Company Limited, and CAT Telecom Public Company Limited. Main agencies that oversee and become the contracting agency for majority of the PPP projects are TOT and CAT Telecom.

11.7.1.3 Sector-Specific Regulations

	2016	2017
Is regulation in place to allow telecommunications companies to have access to property for the installation of the infrastructure?	✓	✓
Is licensing regulation in place?	✓	✓
Is infrastructure sharing permitted?	✓	✓

Primary information and communication technology (ICT) regulations include the Act on the Organizations to Assign Radio Frequency and to Regulate the Broadcasting and Telecommunication Services B.E. 2543 (2000) and the Telecommunication Business Act B.E. 2544 (2001). The Telecommunication Business Act puts in place various reforms in the telecommunications industry, especially with the introduction of a competitive licensing system.

Normally, private communication providers, such as AIS and True, acquire their own premises through renting from private landlords/landowners to install telecommunications equipment. They also rent from the Metropolitan Electricity Authority (MEA) allocation in the MEA network of electricity poles to attach their communication cables. During the second half of 2016, the current military government announced, their policy to transfer all aerial cables in the inner area of Bangkok underground. The MEA is in the process of transferring their cables underground, via a network of underground ducts, and removing concrete electricity poles from the main streets of Bangkok. This work will be carried out in phases and is anticipated to be completed by 2020. It is not apparent that MEA has made provision in its new network of underground ducts. It is not clear how the communication companies will manage this operation to transfer their cables underground.

The National Broadcasting and Telecommunications Commission is the commission responsible for licensing of Thailand broadcasting and telecommunications business.

11.7.1.4 Sector Regulators

ICT sector regulatory agencies in Thailand are described in Table 11.27.

**Table 11.27: Information and Communication Technology Sector
Regulatory Agencies in Thailand**

Agency	Function
Ministry of Digital Economy and Society	This is the government department managing all ICT-related agencies including the National Statistical Office of Thailand, the Thai Meteorological Department, the Electronic Transactions Development Agency, Thailand Post, TOT, and CAT Telecom.

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Table 11.27 *continued*

Agency	Function
National Broadcasting and Telecommunications Commission	<p>An independent regulator for telecom, broadcasting, and spectrum management sector. Responsible for licensing and regulating the use of frequencies and radio communications equipment in broadcasting and telecommunications business, service quality, and licensing fees.</p> <p>The commission sets tariff and price structure, standards, and technical specifications and prescribes measures for the prevention of anti-competitive conduct or unfair competition.</p>

ICT = information and communication technology, TOT = TOT (Telephone Organization of Thailand) Public Company Limited.

Source: Mott MacDonald.

11.7.1.5 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	no data	no data
Performance-based operation and maintenance contract	no data	no data
Engineering procurement and construction contract	✓	✓

11.7.2 Institutional Capacity for Implementation

11.7.2.1 Project Planning in Thailand

	2016	2017
Have sector strategy and investment priorities been defined?	no data	no data
Is there a PPP project pipeline developed and available?	✓	✗

Compared to the PPP Strategic Plan 2015–2019, the updated PPP Strategic Plan 2017–2021 does not include ICT projects.

11.7.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

11.7.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	no data	no data	-
Unsolicited bids	-	-	-
Competitive bidding process	no data	no data	-
PPP projects currently in procurement	n/a	n/a	-

11.7.3 Features of Past PPP Projects

11.7.3.1 PPP Projects That Reached Financial Close in Thailand

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	4	4	-
PPP projects that reached financial close (\$ million)	5,537	5,537	-

All four projects were completed in the 1990s and, therefore, there is very limited information about the projects.

11.7.4 Local Capabilities

Thailand's communication market is very competitive, and it has a strong pool of communications service providers, contractors, and operators..

However, with new technologies continuously evolving, there are always opportunities for foreign investors or technology providers to work together with key players such as AIS, True, and DTAC, and bring in new technology and know-how to this sector.

11.7.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	-	-	-
PPP projects that received export credit agency/international financing institution support	1	1	-

11.7.6 Challenges

Challenges of PPP progress in the ICT sector are shown in Table 11.28.

Table 11.28: Challenges of PPP Progress in the Information and Communication Technology Sector in Thailand

Challenges	Currently Implemented Tackling Measures
Transparency in the government bidding procedures	The government and the National Broadcasting and Telecommunications Commission are understood to be improving the procedures for future procurement of projects.
Slow implementation of new projects in the pipeline	Current military government are understood to be streamlining the process.
Domination of existing service providers	

PPP = public-private partnership.

Source: Mott MacDonald.

11.8 Social Infrastructure

11.8.1 Regulatory Framework

11.8.1.1 Foreign Investor Participation Restrictions

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?		
Healthcare infrastructure	49%	49%
Healthcare services	49%	49%

Education infrastructure	100%		100%	
Education services	100%		100%	
Government buildings	49%		49%	
Prisons and correction centers	49%		49%	
Social housing	49%		49%	
Sport and leisure facilities	49%		49%	

11.8.1.2 Government Contracting Agency

Departments of relevant ministries (Ministry of Public Health, Ministry of Education, Ministry of Social Development and Human Security, and Ministry of Finance), other state agency or local administrative organization, and government educational institutions are likely to act as GCAs for the social infrastructure sector.

11.8.1.3 Sector Regulators

The Ministry of Public Health is the key regulatory agency for the health sector, while the Ministry of Education is the key regulatory agency for the education sector.

11.8.1.4 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	✗	✗
Performance-based operation and maintenance contract	✗	✗
Engineering procurement and construction contract	✓	✓

11.8.2 Institutional Capacity for Implementation

11.8.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	no data	no data
Is there a PPP project pipeline developed and available?	✓	✓

The PPP pipeline of social infrastructure projects is presented in Table 11.29.

Table 11.29: PPP Pipeline of Social Infrastructure Projects in Thailand

No.	Project Name	Responsible Agency	Value (\$ million)
1	King Naresuan The Great Park, Phitsanulok Province	Naresuan University under Ministry of Education	86
2	International Vocational Training Center, Phase 2 at Vocational Education Institute Central 1, Pathumthani Vocational Education College	Office of the Vocational Education Commission under Ministry of Education	62
3	Garden of Innovation for science and technology graduate study	Rajamangala University of Technology Lanna under Ministry of Education	343
4	Modern Town Chiang Rai, Rajabhat University	Chiang Rai Rajabhat University under Ministry of Education	240
5	Center for health and elderly care in the Lower North, Naresuan University Hospital, Faculty of Medicine, Naresuan University, Phitsanulok province	Naresuan University under Ministry of Education	111
6	Nakorn Phatom Medical Centre	Ministry of Health	12
7	Hat Yai Specialist Centre, Hat Yai Hospital	Ministry of Health	48
8	Rachburi Medical Centre	Ministry of Health	22
9	Specialist Medical Centre	Ministry of Health	268
10	Quarantine Centre for Communicable Diseases	Ministry of Health	20
11	Geo-Spatial Industrial Park	Ministry of Science and Technology	93
12	Social Housing along mass rapid transit system in Bangkok and the Greater Bangkok Phase 2	National Housing Association	No information
13	Development of Din Dang Housing Area Phasing 3 and 4	National Housing Association	No information
14	Housing project for government officers	National Housing Association	No information
15	Chiang Mai Housing Project	National Housing Association	No information

PPP = public-private partnership.

Note: Projects with total investment value greater than \$10 million are shown.

Source: State Enterprise Policy Office. 2017. Strategic PPP Plan 2017. Public Private Partnership (PPP) in Thailand. http://www.ppp.sepo.go.th/tiny_mce/plugins/filemanager/thumbs/pipeline2560-2564Final.pdf.

11.8.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	15

11.8.2.3 Procurement

	2016	2017
PPP projects currently in procurement	n/a	-

11.8.3 Features of Past PPP Projects

There have not been any past PPP projects in social infrastructure in Thailand.

11.8.4 Challenges

Table 11.30: Challenges of PPP Progress in the Social Infrastructure Sector in Thailand

Challenges	Currently Implemented Tackling Measures
Untested sector in Thailand for private sector involvement	

PPP = public-private partnership.

Source: Mott MacDonald.

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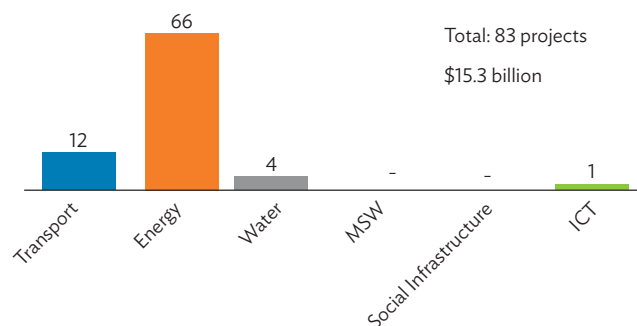
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12. VIET NAM

In Viet Nam, the public–private partnership (PPP) regulatory framework began its existence in 1992, when the definition of build–operate–transfer (BOT) first appeared in the revised Law on Foreign Investment 1992.¹ The first decree on BOT was promulgated in 1993 and, was revised three times from 1998 to 2009. In 2010, the government issued pilot PPP regulations (Decision 71) to promote more PPP projects for infrastructure development. There have been inconsistencies between pilot PPP regulations and the BOT decree. In 2015, new PPP regulations (Decree 15) were enacted to establish a legal framework for both the PPP and the BOT/build–transfer–operate (BTO)/build–transfer project regimes aimed to attract more private investment toward the development of national infrastructure.

Since 1990, there have been 83 PPP projects that have reached financial close, with the majority being in the energy sector (nearly 80% of all projects). Although the newly enacted regulations brought the PPP framework more in line with international practice and addressed some key weaknesses in previous regulations, PPP projects have yet to be implemented under the latest framework (Figure 12.1).

Figure 12.1: PPP Projects in Viet Nam that Have Reached Financial Close, 1990–2017



ICT = information and communication technology, MSW = municipal solid waste, PPP = public–private partnership.

Sources: IJGlobal. IJGlobal Project Finance and Infrastructure Journal. <http://www.ijglobal.com>; World Bank Group. 2015. World Bank Asia Pacific Private Participation in Infrastructure (PPI) Database. <http://ppi.worldbank.org/> (accessed 29 January 2018).

¹ The *PPP Monitor* is envisaged to be a dynamic product and comments for improving data quality are welcome and can be incorporated in future editions. It should also be noted that the report is using standardized definitions which may not match a particular developing member country's definitions. For the meaning of each indicator, please refer to the Appendix.

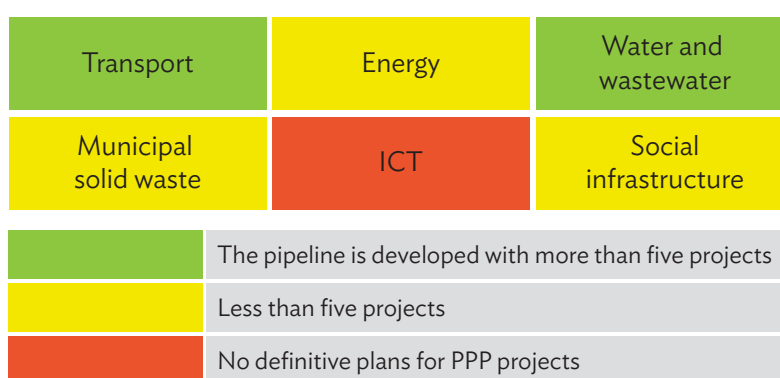
The key advances in the new PPP framework include the following:

- new PPP contract forms that enable availability-/performance-based payment schemes for the wider range of sectors where investment can be recouped through payments by the public sector;
- removal of the previous limit on the viability gap fund (VGF) of 49% of the total investment cost;
- enabling a wider scope of infrastructure projects to be procured as PPPs;
- establishment of processes for PPP project identification, appraisal, and approval; and
- removal of the need for approval from the relevant competent government authority for lenders to execute step-in rights. Instead, lenders and the relevant government authority will have to determine the timing for the execution of the agreement providing for step-in rights.

In 2016, a project development fund (PDF) was also established to assist in PPP project preparation.

In 2014, Viet Nam also announced a pipeline of 127 projects requiring foreign investment up to 2020, out of which about 40 projects are intended to be implemented as PPP projects, mainly in the transport, utilities, and social infrastructure sectors. However, the basis for including the projects in the pipeline is unclear (Figure 12.2).

Figure 12.2: Availability of PPP Pipelines in Viet Nam by Sector

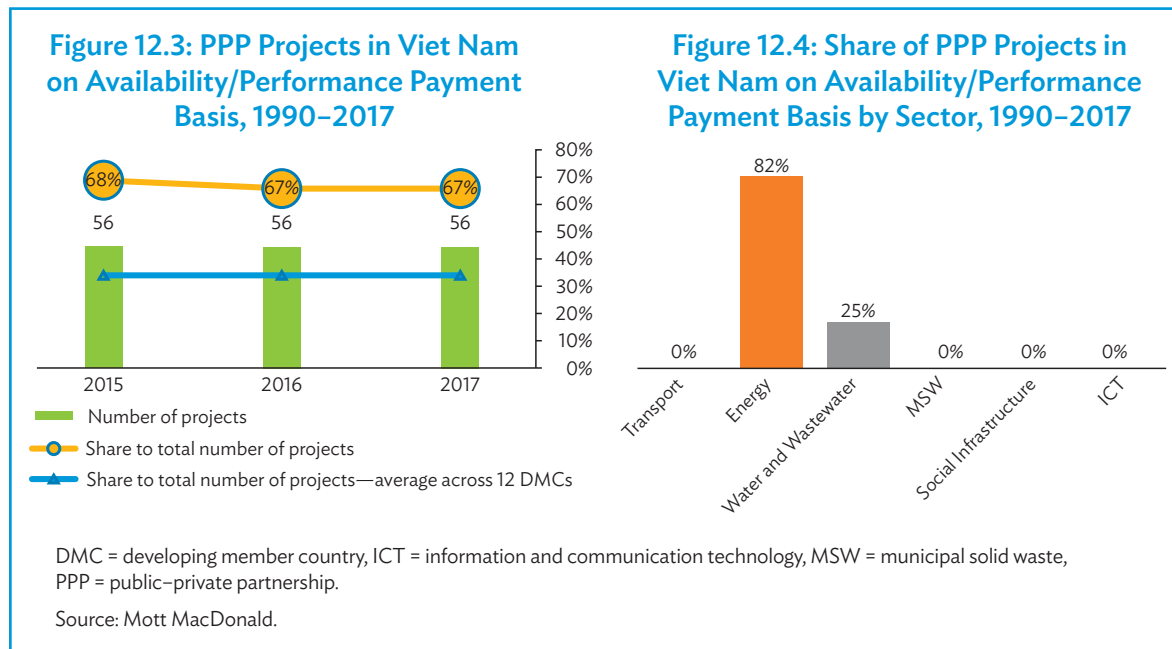


ICT = information and communication technology.

Note: The projects included are published in the official sources.

Source: Mott MacDonald.

Availability payment contracts have been widely applicable in Viet Nam in utilities PPP projects, such as power generation and bulk water supply, where investment is recouped through payment by the government offtakers. New forms of contracts—build–transfer–lease and build–lease–transfer (introduced in new PPP regulations in 2015)—are intended to be applicable for future projects in other sectors such as transport and social infrastructure.



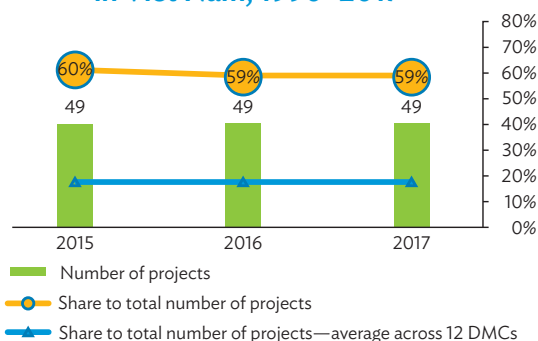
In Viet Nam, state-owned enterprises (SOEs) have historically dominated the development and management of infrastructure projects. The share of PPP projects with SOE participation had been close to 60% in the past 3 years, well above the regional average of 7%. The largest proportion of institutional PPPs appear to be in the transport and energy sectors.

Although investors have raised concerns about bidding transparency and SOE access to state-directed financing, the government has made progress in this area. Decree 30 on investor selection states that SOEs under the management of an authorized state agency (ASA) are not allowed to participate in bidding conducted by that ASA. The provision is intended to ensure a competitive bidding process. The Government of Viet Nam has shown commitment to ensuring equitable competition for PPP opportunities. Sectoral ministries (e.g., Ministry of Transport) have embarked on a road map up to 2020 to privatize and equitize the SOEs.

The share of PPP projects with foreign investor participation in Viet Nam has been in line with the regional average. Low tariffs below cost-recovery levels, dominance of SOEs, a high level of bureaucracy, and low level of transparency are some of the factors that have been deterring foreign investors.

Current restrictions on economic ownership of foreign investors in PPP projects are favorable for utilities (energy, water and sanitation, and waste management allow 100% ownership), but remain limited in other sectors.

Figure 12.5: Institutional PPP Projects in Viet Nam, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Figure 12.6: Share of Institutional PPP Projects in Viet Nam by Sector, 1990–2017

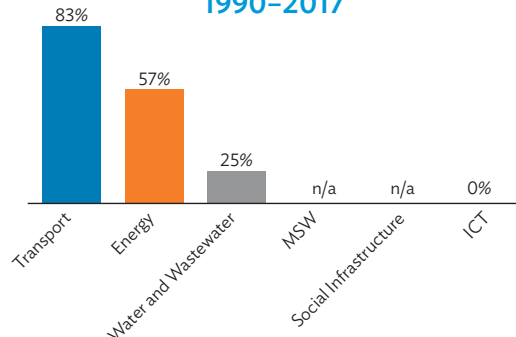
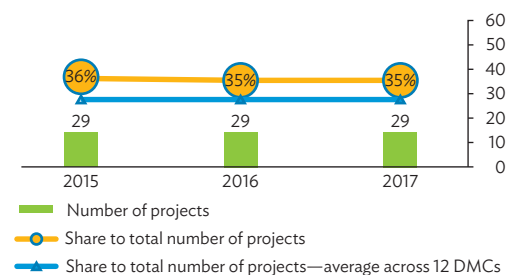


Figure 12.7: PPP Projects in Viet Nam with Foreign Sponsor Participation, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Figure 12.8: Share of PPP Projects in Viet Nam with Foreign Sponsor Participation by Sector, 1990–2017

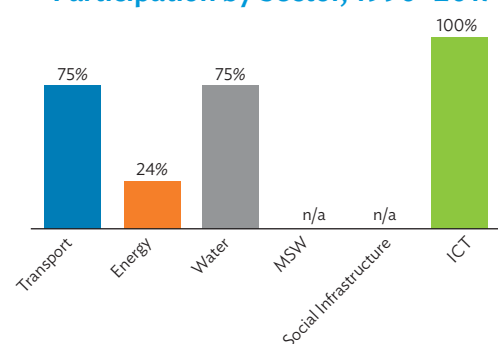
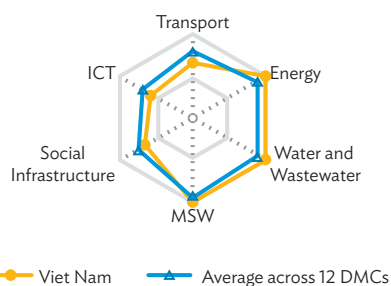


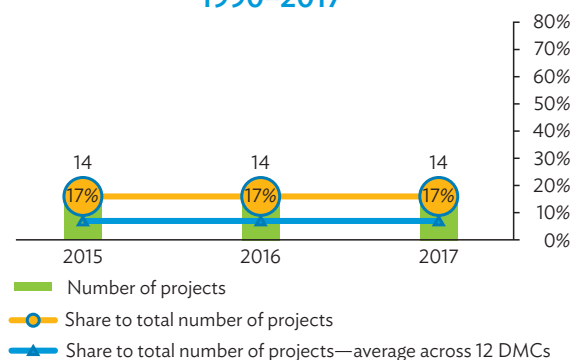
Figure 12.9: Maximum Allowed Ownership of Equity in Greenfield PPP Projects in Viet Nam



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste.

Source: Mott MacDonald.

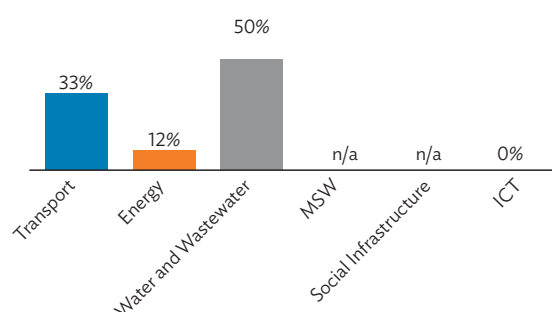
Figure 12.10: PPP Projects in Viet Nam with Export Credit Agency/International Financing Institution Finance Support, 1990–2017



DMC = developing member country, ICT = information and communication technology, MSW = municipal solid waste, PPP = public-private partnership.

Source: Mott MacDonald.

Figure 12.11: Share of PPP Projects in Viet Nam with Export Credit Agency/International Financing Institution Finance Support by Sector, 1990–2017



Difficulties in attracting foreign investors correlate with current challenges for foreign lenders participation. The issues include foreign lenders security (as the framework for credit enhancements and guarantee mechanisms remain unclear even in the new regulations), and restrictions on mortgage over land use rights where land is conferred on a rent-free basis. There are also issues with assurance for foreign currency exchange, convertibility, and remittance of local currency income.

The share of financing from export credit agency (ECA)/international finance institution (IFI) provided for PPP projects has been higher (17%) than the regional average (8%). The energy, transport, and water sectors have benefited from such finance.

Generally, there is the capacity and appetite in international and local banks to finance PPP projects in Viet Nam. However, the lack of well-prepared and structured projects limits the development. In most cases, to provide financing in Viet Nam, international commercial banks would expect to have political risk insurance coverage to be provided either directly by the state or by ECA/IFIs. Also, there is a growing interest from institutional investors (such as pension funds) to finance PPP projects in Viet Nam.

By the end of 2017, there were 29 PPP projects in various stages of preparation and 15 PPP projects under procurement (mostly in the transport and energy sectors). The success of these projects' implementation and of the enforcement of the new PPP regulations remains to be seen.

Key Developments from 2016

There have been no significant changes from 2016 in the PPP environment in Viet Nam.

12.1 Country Profile

12.1.1 Regulatory Framework

12.1.1.1 PPP Law

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	✓	✓

	1990– 2016	1990– 2017	In 2017
Number of PPP projects that reached financial close under the latest PPP law	-	-	-

The Government of Viet Nam has been pushing to complete the new legal framework since 2014. The newly issued key PPP regulations are as follows:

- Decree 15/2015/ND-CP on PPP regulations (on implementation of PPP investment form);
- Decree 30/2015/ND-CP on PPP investor selection;
- Circular 02/2016/TT-BKHDT on preliminary project selection, establishment, appraisal, and approval for project proposal, and feasibility study report on investment project in the form of PPP;
- Circular 06/2016/TT-BKHDT providing guidance on a number of articles under Decree 15;
- Circular 15/2016/TT-BKHDT on the form of submission documents, including request for proposal (RFP) for PPP projects; and
- Ministry of Finance (MOF) Circular 55/2016/TT-BTC on financial management of investment projects in the form of PPP and investor selection expenses.

These regulations have replaced the previously issued pilot PPP regulations (Decision 71/2010) and the existing regulations on BOT projects, BTO projects, and build-transfer projects issued under Decree No. 108/2009.

The following relevant ministries have been drafting circulars related to the newly issued laws and decrees:

- Circular on PDF,
- Circular on PPP contracts, and
- Circular on VGF.

It should be noted that energy PPP projects and transportation PPP projects are also subjected to these sectoral regulations:

- Ministry of Industry and Trade (MOIT) Circular 23/2015/TT-BCT and Circular 38/2015/TT-BCT, and
- Ministry of Transport (MOT) Circular 86/2015/TT-BGTVT.

In addition, it should be noted that general laws (e.g., the Investment Law, the Public Investment Law, the Bidding Law, the Construction Law, and the Law on Public Debt Management) will continue to be applicable to PPP projects together with the new PPP decree.

In November 2017, the Ministry of Planning and Investment announced that a PPP law that will replace Decree 15/2015/ND-CP is being prepared, and is targeted to be submitted to the National Assembly by late 2018.

12.1.1.2 PPP Types

	2016	2017
Number of PPP types defined in the PPP regulations	7	7

Decree 15 defines the following seven types of PPP arrangement:

- BOT
- BTO
- build-transfer²
- build-own-operate
- build-transfer-lease
- build-lease-transfer
- operation and management

Decree 15 introduced additional PPP forms, and among those, build-transfer-lease and build-lease-transfer effectively represent availability/performance-basis payment schemes. Previously, investments can only be recouped through usage fees paid by the end users or offtakers under the traditional forms such as BOT or BTO.

² In the case of build-transfer scheme, investors can recover the investment by exchanging the build-transfer projects with land use rights for other projects. Although it is considered a PPP form in Viet Nam, the Asian Development Bank does not recognize this as a PPP because build-transfer schemes do not pass management and operational risk to the private sector.

2.1.1.3 Eligible Sectors

	2016	2017		2016	2017
Transport			Energy		
Roads	✓	✓	Power generation	✓	✓
Railways	✓	✓	Power transmission	✓	✓
Ports	✓	✓	Power distribution	✓	✓
Airports	✓	✓	Oil and gas	✓	✓
Water and wastewater	✓	✓	Information and communication technology	✓	✓
Municipal solid waste	✓	✓	Social infrastructure	✓	✓

The PPP regulations define the following sectors that are eligible for PPP:

- transportation infrastructure facilities and related services;
- lighting systems, water supply systems, water discharge systems, water collection systems, wastewater treatment, solid waste treatment, social housing, resettlement housing, and cemeteries;
- power plants and power transmission lines;
- infrastructure facilities for healthcare, education, training, vocational training, culture, sport and related services, and office building of state agencies;
- infrastructure facilities for trade, science and technology, hydrometeorology, economic zones, industrial zones, high-tech zones and information and communication technology (ICT) zones, and information technology applications;
- infrastructure facilities for agriculture, rural areas, and services for agricultural products processing and consumption; and
- other sectors as decided by the Prime Minister.

Although the oil and gas sector is not explicitly covered by PPP regulations, this sector can become eligible through a directive from the Prime Minister.

12.1.1.4 Other Applicable Restrictions

	2016	2017
Project funding structure	The equity capital contribution of the nongovernmental investors in a PPP project must be at least 15% of the investment capital (excluding any capital provided by the state) up to D1,500 billion, plus at least 10% of the portion of any investment capital exceeding D1,500 billion.	

	2016	2017
Project capital investment size	D20 billion and above, except for projects developed under operation and maintenance contracts and small projects in agriculture development area	

12.1.1.5 Unsolicited Bids

	2016	2017
Acceptance of unsolicited proposals	✓	✓
Eligibility of the project proponent to have:		
Competitive advantage at bid evaluation	✓	✓
Swiss challenge	✗	✗
Compensation of the project development cost	✓	✓
Government support for land acquisition and resettlement cost	✓	✓
Government support in the form of viability gap fund and guarantees	✓	✓

Pursuant to Article 20.1 of Decree 15, an investor may propose a project outside the projects and lists of projects approved and announced by ministries, departments of ministries, and provincial people's committees.

Under Article 3 of Decree 30, an investor with an approved feasibility study report (or project proposal in case of a group C PPP project) is entitled to preferences during the financial-commercial assessment of a tendering process as follows:

- In case of the service price method of assessment, other tenderers who are ineligible for preferences have to add 5% to their service price.
- In case of the state capital contribution method of assessment, other tenderers who are ineligible for preferences have to add 5% to the state capital contribution portion in their proposals.
- In case of the social benefits and state benefits method of assessment, tenderers eligible for preferences are entitled to have the contribution to the state budget in their proposals increased by 5%.
- In case of the combined method of assessment, tenderers who are eligible for preferences shall enjoy a 5% weighting advantage in the combined method but the total value of the preference shall not exceed 5%.

Furthermore, on a case-by-case basis, certain PPP projects may be entitled to have the benefit of government support in the form of land availability and land fees. On a case-by-case basis, the government can issue guarantees in respect of foreign currency availability (although

no guarantee is provided as to any exchange rate), public utilities, and certain payment or performance obligations arising out of the project. However, there is no specific regulation yet on the provision of government guarantees.

12.1.1.6 Institutional PPPs

	2016	2017	
Are institutional PPP arrangements allowed (e.g., joint venture between government or state-owned enterprises and private firms as a special purpose vehicle company)?	✓	✓	
	1990–2016	1990–2017	In 2017
Institutional PPP projects (number)	49	49	-
Institutional PPP projects (as a share to the total number of PPP projects)	59%	59%	-

Until recently, many projects have been implemented through direct appointment or negotiation by the government with project investors involving SOEs. Under the new PPP regulations, international open tendering will usually apply to the selection of investors for PPP projects. Only under certain circumstances is domestic open tendering or direct appointment method to be used. SOEs can still participate in open tendering. However, investors that are SOEs must enter into a joint venture with other enterprises to propose a project, and the investor, taking part in a bidding, shall not own more than 30% in the ASA or the procuring entity. In addition, SOEs cannot issue a PPP project proposal and receive preferences for the proposal on its own. SOEs are treated in the same manner as private investors, and they are not entitled to any advantage over private investors in tendering process.

12.1.1.7 Land Rights

	2016	2017
Which of the following is permitted to the private partner:		
Transfer land lease/use/ownership rights to third party	✓	✓
Use leased/owned land as collateral	✓	✓
Mortgage leased/owned land	✓	✓
Is there a legal mechanism for granting wayleave rights, for example, laying water pipes or fiber cables over land occupied by persons other than the government or the private partner?	✓	✓
Is there a land registry/cadastre with public information on land plots?	✓	✓

	2016	2017
Which of the following information on land plots is available to the private partner:		
Appraisal of land value	x	x
Landowners	✓	✓
Land boundaries	✓	✓
Utility connections	x	x
Immovable property on land	✓	✓
Plots classification	✓	✓

The key regulation governing land use rights are as follows:

- Land Law 2013, and
- Decree 43/2014/ND-CP (Decree on Guidance of Implementation of Land Law).

There is no pure freehold ownership of the land in Viet Nam; as per the Constitution, land belongs to the state and is subject to administration by the state. Private entities are only permitted to own a right to use the land, which is evidenced by a land use right certificate. In practice, holding such land use rights has very similar effect to a long-term land lease, that is, holders are titled to have all the ownership rights, including selling and leasing.

A land use right can be obtained in any of the following ways:

- allocation from the state for a definite or indefinite period with or without payment of a land use fee;
- lease from an authorized lessor (such as a lease from an industrial zone authority), which is effectively the same as a sublease;
- lease from the state with payment of land rental on an annual basis or with a one-off advance land rental payment for the whole of the lease term;
- receiving an assignment of land use rights from an existing land user such as in the form of exchange, assignment, inheritance, gift, donation, or capital contribution.

The form of land use (land allocation or land lease) and the method of payment of the land use fees or land rental determine what particular rights are available to land users. They also determine if security interests can be created over such rights. For BOT projects where the land is allocated directly by the state on a rent-free basis, investors are typically not entitled to create a security over the land use rights.

The term of the mortgage must not exceed the term of the project contract, unless otherwise agreed in the project contract. The mortgage over land use rights in favor of foreign banks is still restricted under the Land Law. Therefore, certain arrangements, such as involving a domestic security agent and bank account mortgage over sale proceed, are necessary to include land use rights into the security package for foreign banks, although the validity of such arrangements has not been established.

12.1.1.8 Environmental and Social Issues

	2016	2017
Is there a local regulation establishing a process for environmental impact assessment?	✓	✓
Is there a legal mechanism for the private partner to limit environmental liability for what is outside of its control or caused by third parties?	✓	✓
Is there a local regulation establishing process for social impact assessment?	×	×
Is there involuntary land clearance for PPP projects?	✓	✓

The Law on Environmental Protection 2014 is the primary law governing environmental matters in Viet Nam. Before commencing a project in Viet Nam, and depending on the nature of the project, a foreign investor may be required to prepare either an environmental impact assessment (EIA) report or an environmental protection plan before the operation of certain projects.

Although there is no dedicated regulation for social impact compliance, in practice, an EIA report also incorporates any assessment in relation to the social impact of the project. Investors with a detailed and effective plan for compensation and resettlement of local residents tend to achieve a major advantage over the other investors who do not have the same during a tendering process.

There is no special regulation regarding land clearance for PPP projects, so general law will apply. For example, in the case of land recovery, the provincial or district people's committee has the authority to reclaim the land to implement certain projects. A notice must be sent to the land occupiers before the land reclamation effective date (90 days for agricultural land or 180 days for nonagricultural land). After the notice period expires, relevant competent authorities approve a compensation and resettlement plan, and the land occupiers must comply with the land reclamation decision. However, in practice, resistance from local residents make the process burdensome and time-consuming.

12.1.1.9 Foreign Investor Participation Restrictions

Maximum allowed foreign ownership of equity in greenfield projects

	2016	2017		2016	2017
Transport			Energy		
Roads	100%	100%	Power generation	100%	100%
Railways	Various	Various	Power transmission	100%	100%
Ports	Various	Various	Power distribution	100%	100%

Maximum allowed foreign ownership of equity in greenfield projects					
Airports	30%		30%	Oil and gas	100%
Water and wastewater				Municipal solid waste	100%
Bulk water supply and treatment	100%		100%	Social infrastructure	
Water distribution	100%		100%	Healthcare infrastructure	100%
Wastewater treatment	100%		100%	Healthcare services	100%
Wastewater collection	100%		100%	Education infrastructure	100%
Information and communication technology				Education services	100%
Fixed line infrastructure	49%		49%	Government buildings	0%
Fixed line services	65%		65%	Prisons and correction centers	0%
Wireless/mobile infrastructure	49%		49%	Social housing	100%
Wireless/mobile services	65%		65%	Sport and leisure facilities	49%

Is there any restriction for foreign investors on?	2016	2017
Land use/ownership rights as opposed to similar rights of local investors	yes	yes
Currency conversion	yes	yes

The Land Law prevents foreign-owned companies from owning land use rights: they must either lease their land from the state or enter into a joint venture with a local partner that provides the land use rights. Difficulties in finding and preparing a site are one reason why many investors have preferred to arrange a joint venture with the local partner contributing the land and arranging clearance from local authorities for its use. Another restriction is the impossibility of a mortgage on land use right for foreign investors in BOT projects.

Foreigners who would like to work in Viet Nam usually need a work permit with a 2-year maximum term before any renewal. However, there are exceptions to this requirement. For example, without a work permit, a person can fly in and stay for under 3 months at any one time (i.e., although the law is not clear, the authors are of the view that the person may leave Viet Nam before the end of the 3-month period and reenter the next day, whereupon the 3-month time limit will be reset) to conduct sales and marketing activities or work in positions

of experts, managers, chief executive officers, or technicians for a period of under 30 days with the accrued staying period of maximum 90 days a year (provided that other conditions for that person's stay in Viet Nam are fulfilled, e.g., visa).

The dong is not a freely convertible currency and may not be taken out of Viet Nam. Foreign-owned projects that receive revenue in dong are exposed to risks of devaluations in the value of the dong, unavailability of foreign currency available at the time of conversion, that the currency cannot be converted or remitted except at specific times. Profit from foreign investment can be converted to foreign currency and repatriated from Viet Nam through a foreign currency account opened with a financial institution that is licensed to carry out foreign exchange activities.

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	29	29	-
PPP projects with foreign sponsor participation (as a share to the total number of PPP projects)	35%	35%	-

12.1.1.10 Dispute Resolution and Enforcement Mechanism

	2016	2017
Can a foreign law be chosen to govern PPP contracts?	✓	✓
What dispute resolution mechanisms are available for PPP agreements?		
Court litigation	✓	✓
Local arbitration	✓	✓
International arbitration	✓	✓
Has the country signed the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?	✓	✓

Under Article 37 of Decree 15, a foreign law can be chosen to govern the project contract where a foreign investor is a party signing the project contract and/or a guarantee given by the government in favor of a foreign investor.

Under Article 63.2 of Decree 15, any dispute between an ASA and a foreign investor or project enterprise established by a foreign investor during the process of implementation of the project contract and the guarantee shall be resolved by Vietnamese arbitration or Vietnamese court or an arbitration tribunal agreed by the parties. Therefore, international arbitration is allowed.

Any dispute between a project enterprise and a foreign entity or a Vietnamese entity, or any dispute among the investors, shall be resolved in accordance with the Law on Investment. Under Article 14.3 of the Law on Investment, any dispute involving a foreign investor or an enterprise whose majority investment capital is owned by foreigners must be resolved by either Vietnamese court, Vietnamese arbitration, foreign arbitration, international arbitration, or an arbitration tribunal established in accordance with the agreement between the disputing parties.

Viet Nam is a signatory to the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards. However, recognition and enforcement of foreign arbitral awards is not straightforward and has a mixed track record in Viet Nam. For a foreign arbitral award to be enforced in Viet Nam, it must not be contrary to the “basic principles of Vietnamese law.” The term “basic principles of Vietnamese law” does not have a definite meaning and is subject to the broad interpretation of the court. On 20 March 2014, the Supreme People’s Court of Vietnam issued Resolution No. 01/2014/NQ-HDTP, which produced guidelines for the Law on Commercial Arbitration. Article 14(dd) of the Resolution set out certain examples and guidelines on when an arbitral award should be set aside due to contradiction with the “basic principles of Vietnamese law.” This seems to be similar to “public policy” exceptions on foreign arbitral award enforcement that other countries that have also signed up to the New York Convention have also adopted. To set aside an arbitral award, the court must prove that the arbitral award substantially infringes the interest of the state, and the rights and interests of a party to the award or a third party. Two model examples were given, which comprise the infringement of the freedom of contract principle, and coercion or duress in establishment of the arbitral award. Despite the effort of the Supreme People’s Court of Vietnam, the term “basic principles of Vietnamese law” remains ambiguous. The guidelines are still of a generic nature. They give rise to further questions of what constitutes a substantial infringement and how to determine what constitutes “substantial.” Additionally, the model examples are also not as helpful as they could be, because they are examples that quite obviously are contrary to the principles of Vietnamese law.

12.1.1.11 Lender’s Security Rights

	2016	2017
Does the law specifically enable lenders the following rights?		
Security over the project assets	✓	✓
Security over the land on which they are built (land use right) ^a	✓	✓
Security over the shares of a PPP project company	✓	✓
Can there be a direct agreement between the government and lenders?	✓	✓
Do lenders get priority in the case of insolvency?	✓	✓
Can lenders be given step-in rights?	✓	✓

Note:

^a Security over the land is restricted for foreign lenders and also depends on the method of land allocation (section 6.1.1.7).

Under previous PPP regulations, step-in rights were allowed but must be subject to approval from the relevant competent government authority. This approval mechanism was obviously not acceptable to lending banks and could affect the ability of the investors to raise funds for a PPP project. The new PPP regulations remove this approval mechanism and instead require that lending banks and the relevant government authority will determine the timing for execution of the agreement providing for step-in rights. Although the PPP regulations do not legislate the timing of this, typically project lenders require that appropriate direct agreements with government and other project counterparties are in place by financial close for a project.

12.1.1.12 Termination and Compensation

	2016	2017
Does the law specifically enable compensation payment to the private partner in case of early termination due to:		
Public sector default or termination for reasons of public interest	✓	✓
Private sector default	✓	✓
Force majeure	✓	✓
Does the law enable the concept of economic/financial equilibrium?	✓	✓
Does the law enable compensation payment to the private partner due to:		
Material adverse government action	✓	✓
Force majeure	✓	✓
Change in law	✓	✓

The law does not expressly regulate compensation as mentioned, but is typically provided for within the contractual terms agreed between the parties in the project contract (therefore, indicators are marked ✓ and yellow in the preceding table). According to Article 35 of Decree 15, the project contract may be amended or supplemented due to a force majeure event. Under Articles 36.2 and 36.3 of Decree 15, the contract term can be ended if there is a breach by one of the parties without taking effective remedial measures, a force majeure event, or other circumstances stipulated in the project contract. Therefore, the payment or concept can be provided for within the contractual terms agreed between the parties in the project contract. The terms may vary from project to project. For example, concession contracts for BOT power projects in Viet Nam typically contain detailed terms covering force majeure, change in law, default and early termination, and state buyout. It is expected that PPP contracts for other sectors will contain similar provisions.

12.1.1.13 Government Support

		2016	2017
Is project development fund available?		✓	✓
Land acquisition support from the government:			
Resettlement and/or compensation cost to residents at the project site		✓	✓
Imposed limits on time frame to complete land acquisition (day)		×	×
Is there a dedicated agency to streamline land acquisition?		×	×
Exemption from/reduction of land use fees		✓	✓
Viability gap fund (VGF)		✓	✓
Limits to VGF as a percentage of projects capital cost		none	none
Government guarantees:^a			
Currency inconvertibility and transfer risk	Case by case	✓	✓
Foreign exchange risk	Case by case	✓	✓
War and civil disturbance risk ^b		×	×
Breach of contract risk		✓	✓
Regulatory risk ^c		×	×
Expropriation risk		✓	✓
Government payment obligation guarantee	Case by case	✓	✓
Credit guarantees ^d		×	×
Minimum demand/revenue guarantee ^e		×	×
Availability-/performance-based payment contracts		✓	✓
Tax subsidies		✓	✓

BLT = build-lease-transfer, BOT = build-operate-transfer, BTL = build-transfer-lease, PPP = public-private partnership.

Notes:

^a Section 13.3 of the BOT Law Implementing Rules and Regulations explicitly states what type of guarantees could be provided (marked as green in the table). Where regulation is silent on the respective type of guarantee and precedents in practice are unknown, the indicator is marked red.

^b Regulations do not explicitly allow for this type of guarantee, and no precedents are known, therefore the indicator is marked red.

^c There are PPP projects in power and water sectors under power purchase agreements and water purchase agreements. Projects have yet to be implemented under BLT or BTL scheme in sectors other than utilities.

^d There are PPP projects in power and water sectors under power purchase agreements and water purchase agreements. Projects have yet to be implemented under BLT or BTL scheme in sectors other than utilities.

^e Regulations do not explicitly allow for this type of guarantee. There have been few precedents of transport BOT projects for which revenue guarantees were provided, however through Multilateral Investment Guarantee Agency and other international financing institutions, and not the government directly, therefore the indicator is marked red.

Details of available government support for PPP projects in Viet Nam are listed in Table 12.1.

Table 12.1: Details of Available Government Support for PPP Projects in Viet Nam

Government Support Type	Comments
Project Development Fund (PDF)	The concept of the PDF was developed with the assistance of the Asian Development Bank and Agence Française de Développement, and it is understood that the PDF became operational in 2016. The successful bidder will be required to reimburse the cost incurred by the authority for PPP project preparation.
Land acquisition and resettlement	Government processes and procedures can still present obstacles to project implementation with respect to land availability. While there is a requirement for obtaining site clearance prior to construction, it is often difficult to implement. There is no centralized authority responsible for land clearance, as each provincial people's committee is responsible for site clearance and for completing the procedures for allocation or lease of land to implement the project. Where land is scarce and a valuable resource, especially in urbanizing areas, tension arises when local government officials are affected privately or feel beholden to local residents. A conflict of interest with respect to the level of compensation and the political will to implement it becomes an issue. In practice, the provincial people's committees appear to have insufficient resources to carry out site preparation, including making resettlement and paying compensation for the local residents. The works are often overtaken by the developers themselves to avoid delaying the implementation of the project. Sometimes, provincial people's committees make reimbursements to developers, but this tends to be limited in quantity and nominal in nature.
Viability gap fund	New PPP regulations removed the limit on the viability gap fund and allow the relevant government authorities to flexibly determine how much capital will be contributed by the government based on the feasibility study and financial plan for the project, the ability to raise funds by the government and the laws on public investments. Projects eligible for government fund contributions are those proposed by a ministry, departments, or provincial people's committee; or a project falling within the category eligible to use official development assistance and concessional loan capital from a foreign donor. Under Article 11, Decree 15, state investment capital can be used to (i) contribute capital to support construction of the project in the case of a project with commercial operation of collecting user fees but revenue is insufficient to recover investment capital and generate a profit; (ii) pay investors providing services pursuant to build-transfer-lease contract, build-lease-transfer contract, or other similar contract; and (iii) support the construction of auxiliary works; and (iv) arrange compensation for relocation of previous residents, site clearance, and settlement.

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Table 12.1 *continued*

Government Support Type	Comments
Government guarantees	<p>Article 60 of Decree 15 states that a government guarantee such as a payment or performance guarantee, a foreign currency conversion guarantee may be provided based on the result of a feasibility study and negotiations between the foreign investor and the authority. However, there is no clear outline of eligibility conditions. The government may also provide a guarantee on the provision of raw materials, consumption of products and services, and other contractual obligations to the investor, project enterprise, or other enterprises participating in project implementation and/or guarantee on the performance by the SOE on selling fuel and raw materials to, and/or buying products and services from the investors and project enterprise. This is to be assessed on a case-by-case basis depending on the characteristics of the relevant project, and these guarantees are only provided where the counterparty is the authorized state agency or an SOE.</p> <p>Notably, a government guarantee relating to the availability of foreign currency will be for</p> <ul style="list-style-type: none"> • projects falling within the investment policy approved by the National Assembly in accordance with the Law on Public Investment and other related regulations, • infrastructure projects as approved by the government, and • other important projects as decided by the Prime Minister. <p>The PPP regulations do not provide guidance as to what is an “other important project” nor as to what ministry, agency, or authority is being referred to, but it does seem clear that only projects of a certain importance (to be clarified in future implementing regulations or with the government at the time) are intended to benefit from government guarantees of foreign currency availability (and presumably also convertibility and remittance).</p> <p>There has been a long-running lack of commitment of the government to guarantee (i) exchange rate risk and (ii) availability of hard currency for convertibility. Even though Decree 15 made certain provisions, it is understood that the current policy is to strongly discourage such type of guarantees. The practice is to offer a very limited guarantee for currency availability such as 30% at the time the guarantee is called, followed by 70% at a later date <i>if the government has currency available</i>.</p> <p>To date, government guarantees have only been given by the state for the following:</p> <ul style="list-style-type: none"> • Ministry of Finance debt guarantees financing of SOEs. They are only guarantees of payment obligations of an SOE under corporate loans. • Payment guarantees and tariff rate guarantees for certain build-operate-transfer power projects. Only a limited number have successfully achieved financial close with international lenders or commercial operations. This is due to the very long time it seems to take to implement major projects in Viet Nam. The recent change in policy in Viet Nam in relation to foreign currency conversion will potentially make this more challenging. • One project of national importance—the Nghi Son Refinery Project. <p>Also, the government indirectly provided revenue guarantees for three transport projects through the multilateral investment guarantee agency and other international financing institutions.</p>

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Table 12.1 *continued*

Government Support Type	Comments
Availability-/performance-based payment mechanism	Availability- and performance- based payment mechanism has been widely applicable in utilities PPP projects, such as power generation and bulk water supply, where investment is recouped through payment by the government offtakers under the traditional forms such as build–operate–transfer or build–transfer–operate. New forms of contract—build–transfer–lease and build–lease–transfer—introduced in the new PPP regulations, under which the payment to the private partner is to be provided by public sector depending on the service meeting contractually agreed key performance indicators. These forms are intended to be applicable in other sectors, such as transport and social infrastructure.
Tax subsidies	In general, investors and a project enterprise are entitled to incentives in corporate income tax. Depending on the location, characteristics, and operating sector of the project, the incentives will vary. Similarly, incentives for and certain exemptions from import duties are available.

PPP = public–private partnership, SOE = state-owned enterprise.

Source: Mott MacDonald.

PPP projects that received government support	1990–2016	1990–2017	In 2017
Viability gap fund	3	3	–
Government guarantees	33	33	–
Availability-/performance-based payment basis	56	56	–

The data on the number of past projects that received government support in the form of VGF and land acquisition support are limited.

12.1.1.14 Standard Contracts

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	×	×
Power purchase agreement	×	×
Capacity take-or-pay contract	×	×
Fuel supply agreement	×	×
Transmission and use of system agreement	×	×
Performance-based operation and maintenance contract	×	×
Engineering procurement and construction contract	✓	✓

It is understood that the Ministry of Transport (MOT) has a set of standardized contracts developed, which it seeks to implement across the transport sector. However, there has been no evidence found that these standard contracts were used.

12.1.2 Institutional Capacity for Implementation

12.1.2.1 Institutional Setup

	2016	2017
Is there a specialized government agency (or agencies) established for PPP purposes (e.g., PPP unit)?	✓	✓
What role does this PPP unit have?		
Guidance to and coordination between other government agencies	✓	✓
Supporting (e.g., PPP project preparation, appointment of advisers, running project development fund)	✗	✗
Appraisal of PPP project feasibility studies	✗	✗
Approval of PPP projects	✗	✗
Procurement	✗	✗
Managing, monitoring, and enforcing ongoing PPP contracts	✗	✗

PPP-promoting institutions in Viet Nam are described in Table 12.2.

Table 12.2: PPP-Promoting Institutions in Viet Nam

Institution	Role in Promoting PPP
Ministry of Planning and Investment	This is the central coordinating ministry among all ministries and provincial-level people's committee for execution of PPP projects, including technical support and capacity building, formulation of the legal system for PPP, and mobilization of capital for investment preparation costs. The ministry assists the government to uniformly administer investment activities in the PPP form on a nationwide basis and is expected to be an advisor for investors preparing a PPP project.
State Steering Committee for PPP	The role involves mostly coordinating and guiding other government agencies, promoting and building legal framework for PPP, and assisting the Prime Minister in building the PPP system.

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Table 12.2 *continued*

Institution	Role in Promoting PPP
	A Deputy Prime Minister is to chair the committee. Deputy Chairpersons are the Minister of Planning and investment and the Deputy Minister of Finance. The group also includes representatives of the government office, the State Bank of Vietnam, the Ministry of Justice, the Ministry of Industry and Trade, the Ministry of Transport, the Ministry of Construction, and other relevant bodies such as Ha Noi and Ho Chi Minh municipalities.
Management Board of PPP Project Investment under Ministry of Transport	Managing build–operate–transfer transportation infrastructure projects.

PPP = public–private partnership.

Source: Mott MacDonald.

The new PPP regulation requests each ministry and the provincial-level people's committee to assign an internal agency to act as coordinator to manage PPP activities or establish a new unit specialized in PPP project coordination. This agency has a right to appraise PPP project proposals. So far only the MOT had been able to establish the Management Board of PPP Project Investment. This board is envisaged to be a model unit to manage PPP projects since most ministries and the people's committee had not been able to manage PPP projects well in the past.

12.1.2.2 Project Planning

	2016	2017
Is there a PPP project pipeline developed and available?	✓	✓
Is preliminary selection of PPP projects consistent with public investment prioritization?	✓	✓
Is there screening/identification methodology to identify a list of potential PPP projects from public investment priority projects?	✓	✓

For a project to be selected for development under the PPP form, it must represent an eligible sector for PPP; has to be consistent with the development master plan and sectoral and regional development plans, and with the local socioeconomic development plan; and must be prioritized by the ministry, ministerial-level agencies, or provincial people's committee.

The government issued Circular 02/2016/TT-BKHDT that set out the type of analysis to be undertaken to select a PPP project. However, it is not clear if the circular also established the methodology.

Under Decision 631/QĐ-TTg dated 29 April 2014, the Prime Minister issued a list of 127 national projects available for foreign investment until 2020, among which around 40 projects are to be developed in the form of a PPP or BOT project. The National Online Procurement Network System or Tendering Newspaper also frequently makes announcement about certain projects.

Besides, each ministry additionally publishes lists of projects in the sector that it governs. Local people's committees and local departments of planning and investment also publish lists of projects in their governing area.

12.1.2.3 Project Preparation

	2016	2017
Number of project appraisal stages	2	2
What feasibility analyses are required for the project to be approved as a PPP?		
Technical feasibility	✓	✓
Financial feasibility	✓	✓
Legal feasibility	✓	✓
Environmental and social sustainability	✓	✓
Value for money assessment	✓	✓
Fiscal affordability assessment	✓	✓
PPP structuring and risk allocation	✓	✓
Initial market testing	✓	✓
Number of approvals to be obtained by public sector to get final go-ahead to commence PPP project procurement	no data	no data
Is the approval from the Ministry of Finance or equivalent required before commencement of procurement?	×	×
Is it normal practice to appoint independent, international, and qualified advisors to assist the government with project preparation?	×	×

Under the laws, pursuant to Article 8 (5) of Decree 15, in necessary cases, ASAs shall select independent consultancy organizations to support the implementation of a number of duties. Moreover, in necessary cases, the ASA may hire a qualified consultancy organization to support the performance of certain duties. However, there is not much indicative practice in Viet Nam for this. The key issue is budget allocation for appointment and paying for advisers, and this often proves time-consuming or beyond the capabilities of the government to achieve. However, for the upcoming PPP projects, for Viet Nam to make PPP a success, the government will need to retain international and reputable financial, legal, and technical advisors and will need to ensure that there will be an appropriate budget and political will for doing so.

PPP regulations define the following steps prior to commencing procurement:

- (i) The project proposal (prefeasibility study) has to be prepared, evaluated, and approved.
- (ii) Within 7 working days from the approval of a project proposal, the project is publicly announced on the list of PPP projects calling for investors.
- (iii) A project feasibility study has to be prepared, evaluated, and approved.

A feasibility study is the basis for request for proposals for the investor selection and project contract negotiation. The appraisal of the prepared feasibility study is carried out for projects of national importance by the state appraisal committee and for projects of group A and group B by a focal unit managing PPP activities as assigned by ASAs. The Prime Minister approves feasibility studies for projects of national importance and ASAs approve feasibility studies for group A and group B projects.

12.1.2.4 Risk Allocation

	2016	2017
Preferred risk allocation matrix as reference	x	x

Risk allocation has to be analyzed during the project preparation and in the feasibility study report. However, the risk allocation has to be negotiated and concluded on a case-by-case basis in the project contract.

12.1.2.5 Procurement

	2016	2017
Is competitive bidding the only method for PPP partner selection?	x	x
In case of competitive tender:		
Prequalification required?	✓	✓
Minimum time allowed to submit prequalification/expression of interest (day)	30	30
Minimum time allowed to submit a bid:	60–90	60–90
Domestic bidding (day)		
International bidding (day)		
Is negotiation available?	✓	✓
Is there a process allowing unsuccessful bidders to challenge the award/file complaints ?	✓	✓

	2016	2017
If yes, maximum time allowed to submit a complaint starting from announcement of a preferred bidder	10	10
Maximum time limit from bid closing date until selection of a preferred bidder	320	320
Maximum time limit from selection of a preferred bidder until signing the contract	120	120
Transparency. Which of the following is published?		
Procurement notice	✓	✓
Q&A during bid clarification stage	✓	✓
Evaluation results to bidders	✓	✓
Award notice	✓	✓
Contract	✗	✗
Confidentiality	✓	✓

The features of the procurement process are presented in Table 12.3.

Table 12.3: PPP Procurement Process in Viet Nam

Theme	Description
Responsible agency	Authorized state agency (ministries, department of ministries, and provincial-level people's committees)
Project announcement	Within 7 working days from the approval of a project proposal, the procurement notice and invitation for prequalification is published on the national e-procurement system (http://muasamcong.mpi.gov.vn) and the <i>Public Procurement Review</i> newspaper.
Prequalification invitation documentation	<ul style="list-style-type: none"> Guiding information for the investors Eligibility requirements for the investors Requirements on investors' qualifications and experience regarding project implementation and financial-commercial capability Evaluation method
Prequalification evaluation criteria	<ul style="list-style-type: none"> Has ability to arrange funding and implement the project, experience in implementing similar projects, has preliminary methodology of the project implementation and commitment to project implementation, must declare disputes or claims relating to contracts currently being implemented or past contracts

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Table 12.3 *continued*

Theme	Description
Prequalification evaluation method	<p>Submissions can be evaluated on the scoring scale of 100 or 1,000 points. The investor must exceed a prescribed minimum score, which shall not be less than 60% of the total score, and the score of each basic required item shall not be less than 50% of the maximum score for such item.</p> <p>In case only one investor registers and satisfies the requirements of the invitation for prequalification, or only one investor passes the prequalification, direct appointment is possible.</p>
Shortlist	
Request for proposal documentation	<ul style="list-style-type: none"> • General information about the project, including the contents and scope of the project, detailed description of the outputs of the project and the services • Instructions to tenderers, including bidding procedures and the bidding data sheet • Project requirements in accordance with the approved feasibility study: <ul style="list-style-type: none"> – <i>Technical requirements</i>: standards for implementation of the project, quality of project facilities, products and services to be provided; detailed description of the technical requirements and the technical specifications to be used for assessment of bid proposals; and requirements on environment and safety; and – <i>Commercial-financial requirements</i>: financial plan (total investment capital, structure of capital sources and plan on capital mobilization); state investment capital for project implementation (if any); expenditures; revenue sources, price, and fees for products and services; term for recovering capital and gaining profits); and requirements on risk sharing • Evaluation methods • Standard bid forms • Project contract type, term sheet, and contract draft contract, including requirements on performance, facility quality standard, service provision standard, tariff mechanism, applicable regulations, contract rewards and penalties, force majeure events, and the review of contract during the operation of the project and other applicable contents.
Methods of interactions with the bidders	<ul style="list-style-type: none"> • Questions and answers in writing • Pre-bid conferences
Evaluation of technical proposals	<ul style="list-style-type: none"> • Depending on the nature of the project, technical criteria include the following aspects: quantity and quality; operation, management, conducting business, and maintenance; and environment and safety. • Submissions can be evaluated on the scoring scale of 100 or 1,000 points. The investor must exceed a prescribed minimum score, which shall not be less than 70% of the total score, and the score of each basic required item shall not be less than 60% of the maximum score for the item.

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Table 12.3 *continued*

Theme	Description
Evaluation of financial proposals	The evaluation of financial proposals is carried out only for investors that satisfy the technical requirements. Evaluation can be done based on the following methods: <ul style="list-style-type: none"> • lowest service price, • lowest state capital contribution, • highest payment to the state budget, and • combination of the above.
Investor selection	
Contract negotiation	The preferred bidder is invited for negotiations.
Investment agreement signing	The investment agreement is intended to be made between the relevant authorized state agency and the selected investor(s) to confirm the draft project contracts, the rights and obligations of each party in the implementing process for obtaining the investment registration certificate, and to establish the project company, and other matters to be agreed between the parties.
Application for and issuance of an investment registration certificate and establishing the project enterprise	
Contract signing	

PPP = public–private partnership.

Source: Government of Viet Nam. 2015. *Decree 30/2015/ND-CP on PPP Investor Selection*.

12.1.3 PPP Market Maturity

	1990–2016	1990–2017	In 2017
PPP projects that reached financial close	83	83	–
PPP projects currently in preparation	n/a	n/a	29
PPP projects currently in procurement	n/a	n/a	15

12.1.4 Financial Facilities

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	13	13	-
PPP projects that received export credit agency/international financing institution financing	14	14	-

	2016 ^a	2017
Availability of nonrecourse/limited recourse hard currency loan	✓	✓
Maximum tenor (year)	15–20 years	15–20 years
Up-front arrangement fee (bps)	100–300 bps	100–300 bps
Floor rate (reference rate)	LIBOR	LIBOR
Margin rate (bps)	100–500 bps	100–400 bps
Political risk cover premium (bps)	150–400 bps	150–400 bps
Availability of nonrecourse/limited recourse local currency loan	✓	✓
Maximum tenor (year)	10–15 years	10–15 years
Up-front arrangement fee	no data	no data
Floor rate (reference rate)	6-month deposit rate	6-month deposit rate
Margin rate	no data	no data
Availability of interest rate swaps	✓	✓
Forward duration of interest rate swap (year)	1.5–2.0 years	1.5–2.0 years
Availability of currency swaps	✗	✗
Forward duration of currency rate swap (year)	n/a	n/a
Project financing through project bond issuance	✗	✗
Percentage of project bonds out of the total debt for project financing	n/a	n/a
Availability of project financing from local public sector banks	✓	✓
Max tenor for loan from local public sector banks (year)	no data	no data
Percentage of foreign debt out of total debt for project financing	>50%	>50%

	2016 ^a	2017
Typical D:E ratio	60:40	60:40
Timeline to financial close	>12 months	>12 months
Minimum DSCR covenant levels	no data	no data

bps = basis points, D = debt, DSCR = debt-service coverage ratio, E = equity, LIBOR = London interbank offered rate.

^a Sample size = 1 PPP project

International and local banks have the appetite and capacity to finance PPP projects in Viet Nam; however, the lack of well-prepared and structured projects limits the development. Also, there is a growing interest from institutional investors (such as pension funds) to finance PPP projects in Viet Nam. In most cases, to provide financing in Viet Nam, international commercial banks would expect to have political risk insurance coverage to be provided either directly by the state or by ECA/IFIs.

Local governments (provinces) in Viet Nam are allowed to borrow domestically to finance local infrastructure projects. However, local authorities are required to maintain total local outstanding debts below 30% of their annual capital budget, except Ha Noi and Ho Chi Minh City where the limit is increased to 100%.³

The presence of foreign banks is limited in Viet Nam. According to a report by BMI Research, joint venture and foreign banks account for only 9.7% of total banking assets.⁴ Foreign banks in Viet Nam have reportedly been withdrawing capital from Viet Nam, due to a lack of knowledge of local business environment and a higher level of legal compliance than expected, leading to lower-than-expected profitability.⁵ For example, Standard Chartered signaled for plans to withdraw its 15% stake in Asia Commercial Bank,⁶ a Viet Nam-based financial institution. Commonwealth Bank of Australia also sold their Ho Chi Minh branch to Viet Nam International Bank. Australia and New Zealand Banking Group and The Hong Kong and Shanghai Banking Corporation Limited have made similar moves recently.⁷

Project financing in Viet Nam has traditionally focused on the energy and infrastructure sectors. Large power projects have generally been implemented on a BOT basis, as the BOT regulations are more developed than other project models.

Viet Nam has a small debt market and a thin and illiquid secondary market and has not established a system of primary dealers who can make the two-way markets. The total local currency bond market represents only 14.2% of gross domestic product (GDP) and is well below the overall average in emerging East Asian markets. Corporate bonds represent only 0.6% of GDP, well below the 12.5% average in emerging East Asian markets. After the global financial crisis, the maturity profile of government debt in local currency became skewed to the short term, averaging only 3.5 years to maturity.

³ IMF. 2014. Fiscal Decentralization in Vietnam. <https://www.imf.org/external/np/seminars/eng/2014/asiapfm/pdf/batuan.pdf>.

⁴ BMI Research.

⁵ VietNamNet Bridge. 2017. Foreign Banks Scale Down Business in Vietnam. July.

⁶ Tuoi Tre News. 2017. Foreign Banks on Trend to Exit Vietnam. July.

⁷ Viet Nam News. 2017. Common Wealth Bank of Australia sells HCM City branch to VIB. July.

12.2 Roads

12.2.1 Regulatory Framework

12.2.1.1 Foreign Investor Participation Restrictions

	2016	2017
Is there a dedicated legal or policy instrument established for a PPP?	100%	100%

12.2.1.2 Government Contracting Agency

The MOT is a state authority that is competent to enter into a contract upon the approval of both the PPP contract and the feasibility study report.

Many projects are decentralized to provincial authorities that will approve the contract and authorize its agencies to enter into a contract.

12.2.1.3 Sector-Specific Regulations

	2016	2017
Does private partner have a legal right to charge users?	✓	✓

12.2.1.4 Sector Regulators

The PPP Project Management Unit within the MOT is the lead agency to coordinate, support, and manage the implementation of PPP contracts.

What standardized contracts are available and used in the market?	2016	2017
PPP/concession agreement	x	x
Performance-based operation and maintenance contract	x	x
Engineering procurement and construction contract	x	x

12.2.2 Institutional Capacity for Implementation

12.2.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

There is a Transport Sector Development Strategy that identifies the general objectives up to 2020. Potential PPP projects with time horizon up to 2020 comprise about 1,430 kilometers of highways with the total investment volume of \$11 billion. Most of the proposed projects are intended to be implemented as greenfield BOTs with plans to outsource operation and maintenance of expressways currently operational and under construction. Table 12.4 shows the PPP pipeline of road projects.

Table 12.4: PPP Pipeline of Road Projects in Viet Nam

No.	Project Name	Length (km)	Value (\$ million)
1	Dau Giay–Phan Thiet Highway	98	757
2	HCMC Ring Road No.3: Tan Van–Nhon Trach Section	17	400
3	Noi Bai–Ha Long Highway: Noi Bai–Bac Ninh Section	34	110
4	Cam Lo–La Son Highway	102	388
5	Hanoi Ring Road No. 3: Mai Dich–Southern Thang Long	5	250
6	Upgrading the National Road 91, Route from Can Tho to Lo Te	37	120
7	Inter-port Road in Nhon Trach	15	255
8	Route from central City of Quang Ngai to Dung Quat II Port	no data	71
9	Ninh Binh–Thanh Hoa (Nghì Son) Highway	106	847
10	Thanh Hoa (Nghì Son)–Vinh Highway	79	842
11	Dau Giay–Lien Khuong Highway (split into three projects: Dau Giay–Tan Phu; Tan Phu–Bao Loc; Bao Loc–Lien Khuong)	200	1,757
12	Bien Hoa–Vung Tau Highway	75	390
13	Quang Ngai–Quy Nhon Highway	159	1,430
14	My Thuan–Can Tho Highway	24	252
15	HCMC–Moc Bai Highway (Phase 1)	55	333

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Table 12.4 continued

No.	Project Name	Length (km)	Value (\$ million)
16	Nha Trang–Phan Thiet Highway	235	1,405
17	HCMC Ring Road No.3, Section Binh Chuan–National Highway No. 22–HCMC Highway–Trung Luong	47	1,095
18	The Central Mekong Delta Connectivity Project–DATP 5: route My An–Cao Lanh	no data	163
19	The Central Mekong Delta Connectivity Project–DATP 4: route Long Xuyen City and connecting route National Highway no. 91	no data	154
20	Construction and upgrading of Southern Coastal Corridor–DATP 4 (Ca Mau region)	no data	59
21	Franchising the operating expressways: Noi Bai–Lao Cai; HCMC–Long Thanh–Dau Giay; Gie–Ninh Binh	no data	no data
22	Franchising the expressways currently under construction (funded by the state budget and official development assistance): Da Nang–Quang Ngai; Ben Luc–Long Thanh	139	no data
23	Nghi Son–Dien Chau (Nghe An)	55	no data
24	Dien Chau–Bai Vot (Ha Tinh)	111	no data
25	Nha Trang–Cam Lam (Khanh Hoa)	31	225
26	Cam Lam–Vinh Hao (Binh Thuan)	115	no data
27	Vinh Hao–Phan Thiet (Binh Thuan)	82	no data
28	Phan Thiet –Dau Giay (Dong Nai).	142	859

HCMC = Ho Chi Minh City, km = kilometer, PPP = public–private partnership.

Sources: *Government of Viet Nam*. 2016. Presentation to Foreign Investors on Proposal and Policies of Foreign Investment Attraction into Transportation Sector Until 2020. <http://mt.gov.vn/men/news/8/115/presentation-to-foreign-investors-on-proposal-and-policies-of-foreign-investment-attraction-into-transportation-sector-until-2020.aspx>; T. Dung. 2017. Transport Ministry Announces Eight PPP Projects. *VGP News*. 27 December. <http://news.chinhphu.vn/Home/Transport-Ministry-announces-eight-PPP-projects/201712/32712.vgp>.

12.2.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	no data

12.2.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	2	2	-
Unsolicited bids	-	-	-
Competitive bidding process	no data	no data	-
PPP projects currently in procurement	n/a	n/a	1

12.2.3 Features of Past PPP Projects

12.2.3.1 PPP Projects that Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	3	3	-
PPP projects that reached financial close (\$ million)	667	667	-

Three road BOT projects reached financial close: National Highway 20, Phyl My Bridge, and Hanoi–Haiphong Expressway.

12.2.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	1	1	-
PPP projects with foreign sponsor participation (as a share to the total number of road PPP projects)	33%	33%	-

12.2.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	-
Government guarantees:	2	2	-
Minimum traffic/revenue guarantees	1	1	-
Availability-/performance-based payment basis	-	-	-

The National Highway 20 BOT project received guarantees (including revenue guarantees) by the Multilateral Investment Guarantee Agency (MIGA), whereas the Hanoi–Haiphong Expressway project received guarantees by Nippon Export and Investment Insurance.

12.2.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	2	2	-
Government-paid contracts	-	-	-

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	x	x
Advertising	✓	✓

12.2.3.5 Tariffs

There are both open and closed toll systems practiced in Viet Nam. Toll rates are regulated by the MOF. The key points are as follows:

- Tolls on roads for which investment was provided from the government budget shall be standardized at all toll booths as prescribed by the MOF.

- Tolls for roads and other facilities using private sector funds shall not exceed double the tolls on roads for which investment was provided from the government budget.
- The distance between two successive toll booths shall be no less than 70 kilometers.

No evidence is available on the toll rates indexation mechanisms, but information in several feasibility studies suggests an adjustment for inflation once every 3–5 years.

Examples of current toll rates for roads in Viet Nam are presented in Table 12.5.

Table 12.5: Examples of Current Toll Rates for Recently Rehabilitated and Constructed Roads in Viet Nam

Road	Toll type	
Cai Lây toll booth 12-kilometer segment (National Highway 1)	Open (dong per trip)	D25,000 to D140,000 depending on the type of vehicle. Exemption of toll or discount exists for residents of nearby communes.

Source: *Viet Nam News*. 2017. For Whom Do the BOT Toll Bells Toll in Viet Nam. 17 August. <http://vietnamnews.vn/opinion/op-ed/392127/for-whom-do-the-bot-bells-toll-in-viet-nam.html#yRIaae1gzTCr1qcb.99>.

12.2.3.6 Risk Allocation

Typical risk allocation arrangements in road PPP contracts are presented in Table 12.6.

Table 12.6: Typical Risk Allocation Arrangements in Road PPP Contracts in Viet Nam

Risk	Private	Public	Shared	Comment
Traffic risk	✓			
Collection risk	✓			
Competition risk	✓			It is understood that the Ministry of Transport may permit competing alignments without any compensation guarantees. This is considered an important issue for investors.
Government payment risk		✓		External ECA/IFI guarantees were provided.
Environmental and social risk			✓	
Land acquisition risk		✓		
Permits				no data
Geotechnical risk				no data

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Table 12.6 *continued*

Risk	Private	Public	Shared	Comment
Brownfield risk: inventories studies, property boundaries, project scope				no data
Political risk		✓		External ECA/IFI guarantees were provided.
Foreign exchange risk			✓	External ECA/IFI guarantees were provided.

ECA = export credit agency, IFI = international financing institution, PPP = public-private partnership.

Source: Mott MacDonald.

12.2.4 Local Capabilities

There are many local construction companies; however, there is an opinion that their technical and commercial delivery capability is often limited. Operation, maintenance, and toll collection have been dominated by SOEs, particularly by the Viet Nam Expressway Corporation.

12.2.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	3	3	–
PPP projects that received export credit agency/international financing institution support	2	2	–

In two of the three cases of foreign commercial bank participation, lenders have been provided with credit guarantees: in one case by the MIGA and in the other by Nippon Export and Investment Insurance. On these conditions, the loan tenor was 15 years in both cases.

MIGA guarantee scope covered non-honoring of sovereign financial obligations for a duration of the loan tenor.

12.2.6 Challenges

A notable example is the Dau Giay–Phan Thiet Expressway project that was intended to be the first pilot PPP project, but has failed due to non-attractiveness for foreign investors, even with 40% of VGF from the government. Initially announced in 2011, the government wanted to guarantee a loan from the International Bank for Reconstruction and Development to Bitexco, a private local firm that was designated as the primary investor. However, the International Bank for Reconstruction and Development refused to lend directly to Bitexco and expected to see the foreign investor as part of the private consortium. The procurement of a foreign investor was not successful. The project is still on hold at prefinancing stage.

Challenges of PPP progress in the road sector are listed in Table 12.7.

Table 12.7: Challenges of PPP Progress in the Road Sector in Viet Nam

Challenges	Currently Implemented Tackling Measures
Until recently, the weak PPP regulatory environment and probably unrealistic expectations as to the appetite for such projects by the private sector without substantial government viability gap fund and/or guarantees, as toll road projects are among the most difficult to finance worldwide and to accurately estimate future traffic flows and associated revenue streams.	After passing through new PPP regulations addressing several areas of concern for investors, the implementation of these new regulations has yet to be proven.
Historically, SOEs have dominance, especially the Vietnam Expressway Corporation, in developing and managing toll roads, and associated investors' concerns about bidding transparency and SOE access to state-directed and/or preferential financing.	The Government of Viet Nam is committed to ensuring that SOEs compete on a "level playing field" for PPP opportunities. The Ministry of Transport developed a road map up to 2020 to partially privatize the SOEs; however, as of 2016, the Vietnam Expressway Corporation has not ratified a divestment strategy.
There are security issues with foreign lenders including a lack of development of dong-denominated, long-term debt limits bankability for projects. Foreign banks are the most reliable source of medium- and long-term lending. For foreign-denominated debt, lenders are looking for credit enhancements and guarantee mechanisms, for example, either directly by the MOF or through export credit agencies. However, an export credit agency will require guarantees from the MOF which, so far, the MOF refuses to provide.	With few exceptions, most observers believe that until Viet Nam has a more established track record for PPP, credit enhancements and guarantees will be important to making PPP projects bankable. Depending on the level of traffic, potentially minimum traffic/revenue guarantees: <ul style="list-style-type: none"> • guarantees of convertibility of dong to foreign currency, as well as availability and remittance of foreign currency, and • enforceability of step-in rights for lenders. New PPP regulations allow for providing such security measures, but implementation in practice is yet to be proven.
Land acquisition delays due to high level of bureaucracy and decentralization of the process	
Low level of tariffs (toll rates)	Given the uncertainty about the government's commitment to address tariff issues and users' willingness to pay, it will be important for the government to consider various options to provide a viability gap fund to make projects financially viable and bankable. New PPP regulations allow for a viability gap fund, but implementation in practice is yet to be proven.

MOF = Ministry of Finance, PPP = public-private partnership, SOE = state-owned enterprise.

Source: Mott MacDonald.

12.3 Railways

12.3.1 Regulatory Framework

12.3.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	Various	Various

In the railway sector, Viet Nam's World Trade Organization (WTO) commitment explicitly defines foreign ownership cap of 49% only for rail transport services (including passenger transportation and freight transportation). For other types of investment projects that are not listed in Viet Nam's WTO commitment, the investment decision is subject to the approval of the Prime Minister and the National Assembly.

12.3.1.2 Government Contracting Agency

The MOT is a state authority that is competent to authorize its agencies to enter into a contract upon the approval of both the PPP contract and the feasibility study report. In addition, for Ha Noi and Ho Chi Minh City (HCMC), the HCMC Management Authority for Urban Railways and the Hanoi Metropolitan Rail Transport Project Board reporting directly to respective cities people's committees have the authority to implement urban railway projects.

12.3.1.3 Sector-Specific Regulations

There is a basic regulation on railway infrastructure charges applicable to government-financed railway projects. The MOT has not yet submitted a proposal to the Prime Minister for a regulation on railway fees and charges applicable for projects with private sector participation.

12.3.1.4 Sector Regulators

The PPP Project Management Unit within the MOT is the lead agency to regulate and manage PPP contracts. The Vietnam Railway Authority under the MOT approves technical and safety standards for the national and urban rail.

12.3.2 Institutional Capacity for Implementation

12.3.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

The current pipeline of PPP projects has a total investment volume of \$10.3 billion. MOT priorities for private sector participation focus on developing urban railways for HCMC and Ha Noi, upgrading sections of the national rail, and building and operating train stations and adjacent warehouses. There are also plans to franchise existing railway and station operations, initially on routes having commercial advantage.

The PPP pipeline of railways projects is listed in Table 12.8.

Table 12.8: PPP Pipeline of Railways Projects in Viet Nam

No.	Project Name	Length (km)	Value (\$ million)	Suggested PPP Form	Lead Agency
1	HCMC Monorail No. 2	27.2	715	PPP (BOT, build-transfer)	HCMC Urban Railway Management Board
2	HCMC Monorail No. 3	16.5	400	PPP (BOT, build-transfer)	HCMC Urban Railway Management Board
3	HCMC Tramway route No. 1	12.5	250	PPP (BOT, build-transfer)	HCMC Urban Railway Management Board
4	HCMC Metro No. 6	5.6	1,250	PPP (BOT, build-transfer)	HCMC Urban Railway Management Board
5	Hanoi Metro No. 6 (from center of Ha Noi to Noi Bai Airport)	47.0	1,356	PPP	Hanoi Department of Planning and Investment
6	Upgrading of railway route Ha Noi–Ho Chi Minh: Ha Noi–Vinh Section	no data	627	PPP (BOT + ODA)/ODA	Vietnam Railway Authority; Department of Planning and Investment of MOT
7	Upgrading of railway route Ha Noi–Ho Chi Minh: Nha Trang–Sai Gon Section	no data	1,054	PPP (BOT + ODA)/ODA	Vietnam Railway Authority; PPP Investment Board of MOT
8	Railway into Hai Phong International Port	33.0	1,554	PPP (BOT + ODA)/ODA	PPP Investment Board of MOT

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Table 12.8 *continued*

No.	Project Name	Length (km)	Value (\$ million)	Suggested PPP Form	Lead Agency
9	Railway route Bien Hoa–Vung Tau (Phase 1)	no data	2,709	PPP (BOT + ODA)/ODA	PPP Investment Board of MOT
10	Construction and relocation of Da Nang station of the North–South Railway	no data	380	PPP (BOT)	Vietnam Railway Authority; PPP Investment Board of MOT
11	Pilot franchise of the railway route Lao Cai–Ha Noi–Hai Phong	381.0	n/a	PPP (operation and maintenance)	Vietnam Railway Authority; PPP Investment Board of MOT

n/a = not available, BOT = build–operate–transfer, HCMC = Ho Chi Minh City, km = kilometer, MOT = Ministry of Transport, ODA = official development assistance, PPP = public–private partnership.

Source: *Government of Viet Nam*. 2016. Presentation to Foreign Investors on Proposal and Policies of Foreign Investment Attraction into Transportation Sector Until 2020. <http://mt.gov.vn/men/news/8/115/presentation-to-foreign-investors-on-proposal-and-policies-of-foreign-investment-attraction-into-transportation-sector-until-2020.aspx>.

12.3.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

12.3.2.3 Procurement

	2016	2017
PPP projects currently in procurement	n/a	-

12.3.3 Features of Past PPP Projects

There have been no PPP projects in the railway sector so far.

12.3.4 Local Capabilities

Viet Nam relies almost entirely on foreign private contractors to construct and supply rail technology. Railways operation and management has been carried out either by public agencies or by state-owned Vietnam Railways.

12.3.5 Challenges

Challenges of PPP progress in the railway sector are presented in Table 12.9.

Table 12.9: Challenges of PPP Progress in the Railway Sector in Viet Nam

Challenges	Currently Implemented Tackling Measures
Bankability issues due to very high project cost coupled with low rail usage; competition from cheaper sea/roads modes of transport	
Undeveloped sector regulations	The MOT intends to develop and propose to the Prime Minister new policies and regulations relating to railway fees and charges, and potential options of capital payback forms from land development rights, for example, enabling railway station PPP projects to get the revenue from other activities such as operating inland container depots or commercial facilities.
Historic dominance of state-owned Vietnam Railways and the public sector in developing and managing railways, and associated investors' concerns about bidding transparency and SOE access to state-directed and/or preferential financing	The Government of Viet Nam is committed to ensuring that SOEs compete on a "level playing field" for PPP opportunities. The MOT has embarked a road map up to 2020 to partially privatize the SOEs; however, as of 2016, the MOT is yet to develop and propose to the Prime Minister equitization plan of Vietnam Railways.
Land acquisition delays due to the high level of bureaucracy and decentralization of the process, particularly in urban areas of high density	

MOT = Ministry of Transport, PPP = public-private partnership, SOE = state-owned enterprise.

Source: Mott MacDonald.

12.4 Ports

12.4.1 Regulatory Framework

12.4.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	Various	Various

In the maritime sector, Viet Nam's WTO commitment explicitly defines foreign ownership caps for a number of maritime-related activities. For other investment projects that are not listed in Viet Nam's WTO commitment, the investment decision is subject to the approval of the Prime Minister and the National Assembly.

The maximum allowed foreign ownership for defined activities is given in Table 12.10.

Table 12.10: Maximum Allowed Foreign Ownership for Defined Activities in Viet Nam

Business Activity	Maximum Percentage Allowed
International passenger and freight marine transportation service	51%; can be increased to 100% after 5 years of accession to the Viet Nam's WTO Commitments. Note: Only one enterprise each year is eligible for the application.
Domestic passenger and freight marine transportation service	49%
Container loading and unloading service	50%
Custom clearance service	51%; can be increased to 100% after 5 years of accession to the Viet Nam's WTO commitments.
Container warehousing service	51%; unrestricted after 7 years of accession to the Viet Nam's WTO commitments.

Sources: *Government of Viet Nam*. 2016. Presentation to Foreign Investors on Proposal and Policies of Foreign Investment Attraction into Transportation Sector Until 2020. <http://mt.gov.vn/men/news/8/115/presentation-to-foreign-investors-on-proposal-and-policies-of-foreign-investment-attraction-into-transportation-sector-until-2020.aspx>; Viet Nam WTO's Specific Commitments on Service.

12.4.1.2 Government Contracting Agency

The MOT is a state authority that is competent to enter into a contract upon the approval of both the PPP contract and the feasibility study report.

12.4.1.3 Sector-Specific Regulations

To enable private sector participation in a wider range of projects, the MOT intends to develop and propose to the Prime Minister new policies and regulations on maritime safety fees for upgrade and construction of access channels; on inland waterway fees; and on investment incentives for development of inland waterways transport, including policies on financial support. This will enable capital payback through the collection of fees and giving rights of business operations, such as rights to develop riparian land and providing warehousing services.

12.4.1.4 Sector Regulators

The PPP Project Management Unit within the MOT is the lead agency to regulate and manage PPP contracts. The Vietnam Maritime Administration (Vinamarine) and the Vietnam Inland Waterways Administration are agencies under the MOT that assist in the regulation of technical and safety standards. The MOF regulates policy on various port dues (navigation, pilotage, berthage, channel access).

The Vietnamese port sector typically employs a landlord model for major ports, with a port authority or an SOE having responsibility for providing, managing, and operating both marine and landside infrastructure and services.

12.4.2 Institutional Capacity for Implementation

12.4.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

There is a Transport Sector Development Strategy that identifies the general objectives up to 2020. Proposed projects mainly include developing and operating container and commodity terminals, as well as upgrading channel accesses and inland waterways routes. The value of potential PPP projects is \$5.3 billion in the maritime subsector and \$150 million in the inland waterways subsector. Table 12.11 provides the PPP pipeline of maritime projects, while Table 12.12 presents the PPP pipeline of inland waterways projects.

Table 12.11: PPP Pipeline of Maritime Projects in Viet Nam

No	Project Name	Location	Value (\$ million)
1	Channel dredging for large tonnage vessels in Hau River	Tra Vinh Province	150
2	Dredging and upgrading Cai Mep–Thi Vai Channel for vessels with over 100,000 DWT	Ba Ria–Vung Tau	167
3	Dredging Dinh An estuary in Hau River	Da Nang	32
4	Lien Chieu Port (total of three phases)	Da Nang	1,476
5	Hon Khoai deepwater transshipment port for fuels for thermal power projects in the Mekong Delta	Hon Khoai Island	2,500

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Table 12.11 *continued*

No	Project Name	Location	Value (\$ million)
6	Van Phong international transshipment container terminal (Start-up phase)	Van Phong Bay, Khanh Hoa Province	90
7	Ke Ga general and specialized terminal for aluminum industry (Phase 1)	Binh Thuan Province	243
8	Haiphong International Gateway Port (Lach Huyen) Phase 2 container terminal and bulk terminal	Hai Phong	450
9	Investment projects of constructing storm shelters (nine places)	The North and the Central	36
10	Phu Quoc Tourist Port	Phu Quoc Island	80
11	Lach Huyen Port Phase 2 Container Terminal	Hai Phong	120
12	Lach Huyen Port Phase 2 Bulk Terminal	Hai Phong	180

DWT = deadweight ton, PPP = public-private partnership.

Sources: *Government of Viet Nam*. 2016. Presentation to Foreign Investors on Proposal and Policies of Foreign Investment Attraction into Transportation Sector Until 2020. <http://mt.gov.vn/men/news/8/115/presentation-to-foreign-investors-on-proposal-and-policies-of-foreign-investment-attraction-into-transportation-sector-until-2020.aspx>; IJGlobal. IJGlobal Project Finance and Infrastructure Journal. <http://www.ijglobal.com>.

Table 12.12: PPP Pipeline of Inland Waterway Projects in Viet Nam

No	Project	Location	Value (\$ million)	Investment Form
1	Upgrading Ham Luong River from confluence of Tien River to Ham Luong River mouth	Ben Tre	25	PPP (pilot build-operate-transfer)
2	Upgrading Viet Tri-Yen Bai Waterway	Pho Tho, Yen Bai	47	PPP (pilot build-operate-transfer)
3	Upgrading four inland waterways in some estuaries (Day, Tra Ly, Giang and Co Chien estuaries)	Nationwide	23	PPP
5	Phu Dong Container Port	Ha Noi	21	PPP (BOO)
6	Upgrading Bai Chay cruise ship Port	Quang Ninh	19	PPP (BOO)/official development assistance
7	Nhon Duc Port	Ho Chi Minh City	19	PPP (BOO)

BOO = build-own-operate, PPP = public-private partnership.

Source: *Government of Viet Nam*. 2016. Presentation to Foreign Investors on Proposal and Policies of Foreign Investment Attraction into Transportation Sector Until 2020. <http://mt.gov.vn/men/news/8/115/presentation-to-foreign-investors-on-proposal-and-policies-of-foreign-investment-attraction-into-transportation-sector-until-2020.aspx>.

12.4.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	19

12.4.2.3 Procurement

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	4	4	-
Unsolicited bids	-	-	-
Competitive bidding process	no data	no data	-
PPP projects currently in procurement	n/a	n/a	4

One PPP port project, the coal transshipping terminal for thermal power plants in the eastern region of the Mekong Delta (Duyen Hai–Tra Vinh), is currently in procurement. The estimated value of this project is \$1 billion.

The data on the procurement type for past port PPP projects are not exhaustive and are available for 50% of past port projects only.

12.4.3 Features of Past PPP Projects

12.4.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	8	8	-
PPP projects that reached financial close (\$ million)	1,254	1,254	-

The majority of the implemented projects are container terminals that BOT concessions awarded through direct negotiation to a joint venture typically comprising state-owned companies such as the national shipping company Vietnam National Shipping Lines (Vinalines) or port operator Saigon Newport Corporation and a number of international port operators and shipping companies; foreign ownership in the joint venture ranges from 17% to 80%.

12.4.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	7	7	-
PPP projects with foreign sponsor participation (as a share to the total number of port PPP projects)	88%	88%	-

12.4.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	-
Government guarantees	1	1	-
Availability-/performance-based payment basis	n/a	n/a	n/a

12.4.3.4 Payments Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	5	5	-
Government-paid contracts	no data	no data	-

	2016	2017
What additional revenue streams are allowed?		
Land use development rights	x	x
Wharf charge	x	x
Navigation charge	x	x
Pilotage charge	x	x
Channel access charge	x	x

To date, freight terminal project companies are only permitted to carry out storage, loading and unloading, and transshipment services, and are paid by the port users such as shipping lines and logistics companies. However, as noted in section 12.4.1.4, there are plans to allow private companies to have land development rights and to charge channel access fees.

12.4.3.5 Concession Fees

	2016	2017
What are the typical mechanism for the fee paid to the government?		
Lump sum		
Royalties		
Revenue share		
Profit share		
Annual lease	✓	✓

The private sector typically leases land for developing private bulk freight terminals, container terminals, and logistics business. The typical mechanism for the fee paid to the public sector is a land lease fee or annual concession fee.

12.4.3.6 Tariffs

	2016	2017
Does private sector have the freedom to set the tariff?	✓	✓

The freedom to establish commercial rates within the Vietnamese port system is unclear. The general interpretation is that the cargo handling tariffs should be set by private terminal operators through private negotiations based upon market conditions. However, in setting such tariffs, the private operators are meant to stay within certain informal boundary limits, satisfying public authority regulatory concerns. The port dues are set by the public port authority within a regulated market.

The contractual container handling arrangement between the shipper and the shipping line is set out within the terminal handling charge (THC). This covers the movement of a container from the ship's hold, via the terminal's container yard, to the exit-entry gate. In 2011, the formal national cargo THC was \$85 for a twenty-foot equivalent unit movement and \$125 for a forty-foot equivalent unit. Actual THC levied will vary depending upon the details of the specific service contracts between the terminal operators and the shipping line. This takes into account the annual volumes shipped, the timing and priority of certain berth priority, and operational handling performance standards. These rates are commercially confidential and rarely released to the market.

12.4.3.7 Labor

How is the issue of excess and efficiency of labor force typically being resolved?

Private operator given the freedom to hire and fire and to set its own terms and conditions of employment

✓

The pre-PPP workforce is transferred to the private operator. Private operator is allowed to make gradual changes to the terms and conditions of employment, providing these are no worse than before and/or are acceptable to the unions or workers' representatives.

The port authority or government undertakes a major labor force restructuring in advance of the PPP, and the workforce is transferred to the private operator.

12.4.3.8 Risk Allocation

Typical risk allocation arrangements in port PPP contracts are presented in Table 12.13.

Table 12.13: Typical Risk Allocation Arrangements in Port PPP Contracts in Viet Nam

Risk	Private	Public	Shared	Comment
Demand risk	✓			Shippers and logistics businesses typically will only enter into short-term (1–4 years) terminal usage contracts. This leaves the project company exposed to significant demand risk.
Competition risk (exclusivity)	✓			In principle, the public sector is required to regulate the development of the sector. However, recent economic activity in the Ho Chi Minh City area demonstrated that capacity development has been insufficiently regulated, resulting in significant private sector competition risk.
Tariff	✓			
Environmental and social risk	✓	✓	✓	The port authority bears the greatest responsibility in developing basic infrastructure in compliance with environmental and social regulations.
Land acquisition risk		✓		The port authority bears the greatest responsibility in land acquisition/reclamation.
Permits	✓	✓	✓	Subject to permits
Geotechnical risk		✓		The port authority bears the greatest responsibility in land acquisition/reclamation.

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Table 12.13 *continued*

Risk	Private	Public	Shared	Comment
Foreign exchange risk	✓			Most international trade will be conducted in United States dollars, mitigating this risk, but, typically, cranes and equipment are imported, with purchase denominated in United States dollars.
Political risk	✓	✓	✓	

PPP = public-private partnership.

Source: Mott MacDonald.

12.4.4 Local Capabilities

The Viet Nam market has developed a reasonable capacity for marine civil works; however, major works are normally carried out in joint venture with international contractors. Due to the significant number of coastal ports, there is a reasonable domestic stevedoring capacity. The management and operation of international ports is normally led by international port operator companies.

12.4.5 Project Financing

	1990–2016	1990–2017	In 2017
PPP projects with foreign lending participation	4	4	–
PPP projects that received export credit agency/international financing institution support	2	2	–

12.4.6 Challenges

Challenges of PPP progress in the port sector are shown in Table 12.14.

Table 12.14: Challenges of PPP Progress in the Port Sector in Viet Nam

Challenges	Currently Implemented Tackling Measures
Undeveloped sector regulations in some areas	The Ministry of Transport intends to develop and propose to the Prime Minister new policies and regulations relating to some maritime and inland waterway fees and charges, such as maritime safety fees for upgrade and construction of access channels; inland waterway fees; and investment incentives for development of inland waterways transport, including policies on financial support.

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Table 12.14 *continued*

Challenges	Currently Implemented Tackling Measures
Extensive cabotage trade can undermine bankability of larger and more efficient ports. Due to the extended coastal geography together with constraints for land-based freight transport, Viet Nam has a very active coastal and river-based "cabotage" trade operated from many shallow draft ports and terminals, many of which are owned and operated in joint ventures between SOEs and international private investors.	
Historic dominance of state-owned companies, such as Vietnam National Shipping Lines (Vinalines) and Saigon Newport Corporation, and public sector agencies in developing and managing port projects.	The Government of Viet Nam is committed to ensuring that SOEs compete on a "level playing field" for PPP opportunities. The Ministry of Transport developed road map up to 2020 to partially privatize the SOEs. It is expected that a 30% stake in Vinalines to be sold to foreign company, as well as its 10 port businesses to be divested to the private sector.
Lack of efficient hinterland connections resulting in rising costs of inland transports	
Lack of management of inland waterways. Inland transport routes are still highly dependent on the natural conditions of the waterways.	

PPP = public-private partnership, SOE = state-owned enterprise.

Source: Mott MacDonald.

12.5 Airports

12.5.1 Regulatory Framework

12.5.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects	30%	30%

12.5.1.2 Government Contracting Agency

The MOT is a state authority that is competent to enter into a contract upon the approval of both the PPP contract and the feasibility study report.

12.5.1.3 Sector-Specific Regulations

There are several regulations that will have an impact on PPP projects:

- The Association of Southeast Asian Nations (ASEAN) Single Aviation Market came into effect in January 2015. This policy aims to liberalize the air transport market in each ASEAN member state to boost the region's connectivity and competitiveness as well as reduce airfares. The single market allows ASEAN-based carriers to carry passengers and cargo from and to any third country to an ASEAN member state. This requires each state to fully open up their international airports to other ASEAN members and eliminate restrictions on the frequency and maximum capacity of flights.
- The largest and most congested airports are usually subject to slot coordination to manage any spare capacity efficiently. Slots are either allocated by air traffic control or an independent slot coordination body based on a number of allocation rules. The usage of slots is typically tied to an airlines utilization of each slot, its on-time performance, and previous slot utilization. Slots are usually allocated for each summer and winter season.
- The International Civil Aviation Organization publishes a number of regulations that airport operators are required to adopt to ensure safe and secure air transport operations. This includes Annex 14 that sets out the physical requirements for any type of civil airport for it to receive an operating license from the National Civil Aviation Authority, as well as Annex 17 that deals with various security measures to safeguard the aviation industry against acts of unlawful interference. The MOT and the civil aviation authorities are responsible for implementing and monitoring compliance with these regulations.
- Any development-related regulation around airports to ensure that obstacle limitation surfaces are maintained for the safe operation of aircraft from and to the airport.
- Security, customs, and immigration-related regulations that specify the requirements of functions undertaken by the state or public authorities.

12.5.1.4 Sector Regulators

Airport sector regulatory agencies in Viet Nam are described in Table 12.15.

Table 12.15: Airport Sector Regulatory Agencies in Viet Nam

Agency	Function
Ministry of Transport (MOT)	Direct the implementation of master plans and plans on development of transport infrastructure; announce and direct the opening and closure of airports and airfields and the establishment of air routes; and organize the registration and grant of airport and airfield registration certificates, the management of activities in airports, airfields, as well as civil aviation security programs and schemes.

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Table 12.15 *continued*

Agency	Function
Public–Private Partnership Project Management Unit within MOT	Lead agency to regulate and manage public–private partnership contracts
Civil Aviation Authority of Vietnam	Department under the MOT which is responsible for the deployment of air traffic control equipment, surveillance, and aviation safety and security, as well as regulating the civil aviation sector in the country.
Vietnam Air Traffic Management Corporation	Operates air traffic control and responsible for the provision of all air traffic services in Vietnamese airspace
Ministry of Public Security	Provides airport security-related functions as well as immigration and customs functions

Source: Mott MacDonald.

12.5.2 Institutional Capacity for Implementation

12.5.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

There is a Transport Sector Development Strategy that identifies the general objectives up to 2020. There are potential airport PPP projects identified up to 2020 with a total investment volume of \$7.8 billion, comprising both greenfield and expansion of existing facilities, as well as piloting the outsourcing of operation and maintenance (O&M) of several airport facilities, such as cargo and passenger terminals.

The PPP pipeline of airport projects is shown in Table 12.16.

Table 12.16: PPP Pipeline of Airport Projects in Viet Nam

No	Project Name	Value (\$ million)
1	Long Thanh International Airport Phase 1	5,400
2	Lao Cai Airport	70
3	Cam Ranh International Airport Expansion	211
4	Da Nang International Airport Expansion	152
5	Noi Bai International Airport Terminal 2	968

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Table 12.16 continued

No	Project Name	Value (\$ million)
6	Pilot franchise part or whole of the infrastructure in some airport terminals (Passenger Terminal T1, Noi Bai Airport; Phu Quoc Airport Terminal)	no data
7	Tan Son Nhat Airport Expansion	no data

PPP = public-private partnership.

Sources: *Government of Viet Nam*. 2016. Presentation to Foreign Investors on Proposal and Policies of Foreign Investment Attraction into Transportation Sector Until 2020. <http://mt.gov.vn/men/news/8/115/presentation-to-foreign-investors-on-proposal-and-policies-of-foreign-investment-attraction-into-transportation-sector-until-2020.aspx>; IJGlobal. IJGlobal Project Finance and Infrastructure Journal. <http://www.ijglobal.com>.

12.5.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	-

12.5.2.3 Procurement

Data not available.

12.5.3 Features of Past PPP Projects

12.5.3.1 PPP Projects that Reached Financial Close

	1990–2016	1990–2017	In 2017
PPP projects that reached financial close (number)	1	1	-
PPP projects that reached financial close (\$ million)	no data	no data	-

There was only one PPP project in the early 1990s, namely developing and operating an international air cargo terminal in Ho Chi Minh City. The project was a joint venture of Vietnam Airlines Corporation, Singapore Airport Terminal Services, and Southern Airports Services Company. Limited information is available on details of this project.

12.5.4 Local Capabilities

The operation and management of airports is centralized in Viet Nam. Viet Nam's 7 international airports and 15 domestic airports are operated by the Airports Corporation of Vietnam (ACV). Tenders for construction or improvement works are usually only released

to the national construction sector through the ACV website or separate tender notices. It is understood that the Sun Group, a national property developer and contractor, is one of the major players in the sector and is, for example, responsible for the construction of the Van Don Airport.

12.5.5 Challenges

Challenges of PPP progress in the airport sector are presented in Table 12.17.

Table 12.17: Challenges of PPP Progress in the Airport Sector in Viet Nam

Challenges	Currently Implemented Tackling Measures
The mechanisms and policies in place to attract private investors are insufficient. Concerns have also been raised that the government should retain a 51% share in each case limiting the control of foreign investors. It is also understood that government plans intend to offer projects to local investors first before implementing international tenders to the wider market.	The MOT intends to develop and propose to the Prime Minister new policies and regulations relating to removing the limit of foreign capital ratio for investment and business in airport commercial facilities and specialized airports; finalizing fees and service charges to be in line with service quality and investment costs; and investment incentives, such as concessional loans, commercial loan guarantees, policy facilitation (e.g., tax, land), for companies with regard to aviation infrastructure investment.
The execution of the projects and bringing potential PPP projects to the market are slow. An example of this would be the construction of the Van Don Airport, which was initially awarded to a Viet Nam-based organization that is funded by the Republic of Korea. Due to the lack of progress in the construction, in 2015, the government reallocated the development rights to the Sun Group.	The MOT intends to actively develop detailed proposals on investment and transfer of rights to airport infrastructure business operations.
State-owned companies, such as ACV and the Vietnam Airlines Corporation, have historically dominated the development and management of airport projects.	<p>The Government of Viet Nam is committed to ensuring that state-owned enterprises compete on a “level playing field” for PPP opportunities. The MOT developed a road map up to 2020 to equitize and partially privatize the state-owned enterprises.</p> <p>A 20% stake in both ACV and Vietnam Airlines Corporation is expected to be sold to foreign investors. Currently, the MOT is approving the purchase of a 7.4% stake in ACV to Paris Aéroport. This would provide Paris Aéroport with a strategic role to influence the privatization of airports in Viet Nam as well as its terms and conditions.</p>

ACV = Airports Corporation of Vietnam, MOT = Ministry of Transport, PPP = public-private partnership.

Source: Mott MacDonald.

12.6 Energy

12.6.1 Regulatory Framework

12.6.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects^a	100%	100%
Power generation	100%	100%
Power transmission	100%	100%
Power distribution	100%	100%
Oil and gas	100%	100%

^a Subject to the approval of the licensing authorities.

12.6.1.2 Government Contracting Agency

Vietnam Electricity (EVN) acts as a government contracting agency. It holds a monopoly position in the power market in Viet Nam and is organized into several subsidiary regional companies. EVN is a holding company for

- generation: equitized (EVN holds the majority) or subsidiary power plants account for 61.4% of installed capacity,
- scheduling and dispatching,
- transmission, and
- distribution.

12.6.1.3 Sector-Specific Regulations

The Electricity Law 2005 outlines the major principles for the establishment of the power market in Viet Nam, including diversification in power sector investments, development of competitive generation, and wholesale competitive and retail competitive markets. Regarding codes and standards applied in energy projects, it is expected that all material, workmanship, and testing shall be in accordance with the appropriate international specifications, standards, and codes of practice. Usually, the standards of operation are in accordance with

- the terms and conditions set in the power purchase agreement;
- the operation parameters set forth in the dispatch agreement;
- all laws of Viet Nam, including but not limited to the dispatch rules;
- the manufacturer's recommendation and prudent utility practices; and
- the operating procedures and dispatch instruction of EVN.

The Grid Code issued by the Ministry of Industry and Trade (MOIT) Circular 12/2010/TT-BCT dated 15 April 2010 regulates the power transmission network.

12.6.1.4 Sector Regulators

Energy sector regulatory agencies in Viet Nam are described in Table 12.18.

Table 12.18: Energy Sector Regulatory Agencies in Viet Nam

Agency	Function
Ministry of Industry and Trade (MOIT)	Responsible for the development of energy policies and plans
Ministry of Planning and Investment	Coordinating ministry for both BOT and PPP, gathers opinions from relevant authorities, and reporting to the Prime Minister for approval
Electricity Regulatory Authority of Vietnam under MOIT	Assists the MOIT in operating the electricity sector of Viet Nam; is responsible for monitoring supply/demand balance, supervising the power market, tariff regulation, and licensing; and implements the proposed plans and projects and the settlement of complaints and disputes in the market.

BOT = build–operate–transfer, PPP = public–private partnership.

Source: Mott MacDonald.

12.6.2 Institutional Capacity for Implementation

12.6.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	n/a	n/a

Specific electricity generation plans are outlined in Viet Nam’s Master Power Development Plan (PDP) led by the MOIT, and the Renewable Energy Development Plan to 2030 with outlook to 2050, which was signed by the Prime Minister in 2016.

The revised PDP VII for the period 2016–2030 includes the two objectives of providing adequate electricity to support an average gross domestic product growth rate of 7% to 2030 and prioritizing the development of renewable energy sources for electricity production.

Coal is projected to be the main source for electricity production, while the proportion of electricity from renewable sources is expected to increase up to 7% by 2020 and above 10% by 2030.

In October 2016, the General Directorate of Energy, as part of the MOIT, announced that they would develop the national renewable energy program. They also proposed to look at incentives and other supporting mechanisms such as tax incentives, preferential treatment for land, and policies for environmental protection.

12.6.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	10

12.6.2.3 Procurement

	1990–2016	1990–2017	In 2017
PPP projects procured through:			
Direct appointment	12	12	no data
Unsolicited bids	–	–	no data
Competitive bidding process	8	8	no data
License scheme	30	30	no data
PPP projects currently in procurement	n/a	n/a	9

The data on the procurement approach applied for past PPP energy projects are not exhaustive. It is understood that the MOIT does not fully agree with the PPP approach in Decree 15; instead, the ministry focuses on direct appointment deals in which negotiations take longer than 6 years to sign a project.

Negotiation is underway for each of the following:

- Ninh Thuan PV Solar Farm (168 megawatts [MW]),
- Song Hau 2 Coal-Fired Power Plant (2,120 MW),
- Nghi Son 2 Coal-Fired Power Plant (1,200 MW),
- Ninh Thuan PV Solar Plant (30 MW),
- Can Tho PV Solar Farm (40 MW),
- Vinh Tan 3 Coal-Fired Power Plant (1,980 MW),
- Nam Dinh 1 Coal-Fired Power Plant (1,200 MW) IPP,

- Vung Ang 2 Coal-Fired Power Plant (1,200 MW) IPP,
- Vung Ang 3 Coal-Fired Power Plant (1,200 MW) IPP,
- Van Phong 1 Coal-Fired Power Plant (1,200 MW) IPP,
- Phu Cuong Wind Farm Phase 1 (200 MW),
- Thanh Hoa PV Solar Plant (30 MW), and
- Vinh Tan 4 Coal-Fired Power Plant (1,200 MW).

12.6.3 Features of Past PPP Projects

12.6.3.1 PPP Projects That Reached Financial Close

	1990–2016		1990–2017		In 2017	
	Number	\$ million	Number	\$ million	Number	\$ million
PPP projects that reached financial close	65	12,744	65	12,744	-	-
<i>Renewable energy generation:</i>	55	2,633	55	2,633	-	-
Solar	-	-	-	-	-	-
Wind	5	104	5	104	-	-
Hydro	48	2,509	48	2,509	-	-
Geothermal	-	-	-	-	-	-
Waste/biomass	2	20	2	20	-	-
<i>Thermal energy generation:</i>	10	8,811	10	8,811	-	-
Coal	6	7,769	6	7,769	-	-
Diesel	2	590	2	590	-	-
Natural gas	2	452	2	452	-	-
Energy transmission and distribution	1	1,300	1	1,300	-	-

The projects have been conducted in the traditional independent power producer (IPP) model. IPPs in Viet Nam were first introduced in 2002 under the following categories:

- BOT or build–own–operate ventures wholly owned by public-owned Vietnamese entities, other than EVN;
- BOT or build–own–operate joint ventures with EVN and other parties (local or foreign investors);
- BOT ventures wholly owned by foreign parties (public or private sector); and
- joint-stock company created under EVN’s equitization program.

12.6.3.2 Foreign Investor Participation

	1990–2016		1990–2017		In 2017	
	Number	Share of the total number of projects	Number	Share of the total number of projects	Number	Share of the total number of projects
PPP projects with foreign sponsor participation						
Renewables	5	9%	5	9%	-	-
Thermal	10	100%	10	100%	-	-
Energy transmission and distribution	1	100%	1	100%	-	-

12.6.3.3 Government Support

	1990–2016	1990–2017	In 2017
PPP projects that received government support:			
Viability gap fund	3	3	-
Government guarantees	31	31	-
Availability-/performance-based payment basis	55	55	-

12.6.3.4 Payment Mechanism

	1990–2016	1990–2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	-	-	-
Government-paid contracts	55	55	-

IPP projects in Viet Nam have a contract with the government to sell capacity and net energy output to EVN, and the resultant power purchase agreement is structured to include a separate annual fixed capacity charge and a variable charge based on net energy output.

12.6.3.5 Tariffs

Is there a system of feed-in tariffs (FIT)?		✓
Typical FIT levels	Type	\$/kilowatt-hour (kWh)
EVN has to buy all the plant's wind energy output, and the Vietnam Environment Protection Fund will accordingly subsidize to EVN.	Wind	0.78
For small hydro, the tariff follows an avoided cost mechanism measured by year and by season.	Hydro	0.5
	Biomass	0.58
FIT is being considered.	Biogas and geothermal	n/a
The government is currently preparing solar photovoltaic (PV) support legislation. The first drafts were released in 2015 and developed further in the first half of 2016, which include a FIT of \$0.112/kWh for large-scale, grid-connected free-field PV power plants, and a net metering credit for excess solar power fed into the grid set at \$0.15/kWh for rooftop systems.	Solar PV	0.11 0.15

For thermal IPP projects, tariffs are not normally disclosed as they are considered commercially sensitive information. On an aggregate basis over the life of the contract, capacity charges constitute about 25%, O&M payments about 8%, and fuel costs about 67% of the tariff revenues.

The government strictly regulates retail electricity prices (which, ultimately affect the wholesale market) and periodically, the MOIT recommends adjustments to these levels that require the Prime Minister's approval before being implemented.

12.6.3.6 Risk Allocation

Typical risk allocation arrangements in energy PPP contracts are presented in Table 12.19.

Table 12.19: Typical Risk Allocation Arrangements in Energy PPP Contracts in Viet Nam

Risk	Private	Public	Shared	Comment
Demand risk		✓		
Revenue collection risk		✓		
Tariff risk	✓			
Government payment risk		✓		

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Table 12.19 *continued*

Risk	Private	Public	Shared	Comment
Environmental and social risk	✓			
Land acquisition risk			✓	
Permits	✓			
Handover risk	✓			
Political risk		✓		
Regulatory risk		✓		
Interconnection risk			✓	
Brownfield risk: asset condition				not applicable
Grid performance risk	✓			
Hydrology risk	✓			
Exploration and drilling risk				not applicable

PPP = public–private partnership.

Source: Mott MacDonald.

12.6.4 Local Capabilities

The majority of local companies involved in the energy sector are SOEs. The capabilities of the different entities do vary, but the selection of the entity that will be involved in a project is based on geography. Until recently, the construction of the projects has been undertaken by state-owned contractors who have formed a joint venture with specialist international contractors, if needed. There has been a recent influx of international organizations setting up local entities to deliver services in the energy sector within Viet Nam.

12.6.5 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	6	6	–
PPP projects that received export credit agency/international financing institution support	8	8	–

12.6.6 Challenges

As of February 2018, projects that were under negotiation but have not yet reached financial close for more than 2 years include the following:

- Ninh Thuan PV Solar Farm (168 MW),
- Song Hau 2 Coal-Fired Power Plant (2,120 MW),
- Nghi Son 2 Coal-Fired Power Plant (1,200 MW),
- Ninh Thuan PV Solar Plant (30 MW),
- Can Tho PV Solar Farm (40 MW),
- Vinh Tan 3 Coal-Fired Power Plant (1,980 MW),
- Nam Dinh 1 Coal-Fired Power Plant (1,200 MW) IPP,
- Vung Ang 2 Coal-Fired Power Plant (1,200 MW) IPP,
- Vung Ang 3 Coal-Fired Power Plant (1,200 MW) IPP,
- Van Phong 1 Coal-Fired Power Plant (1,200 MW) IPP,
- Phu Cuong Wind Farm Phase 1 (200 MW),
- Thanh Hoa PV Solar Plant (30 MW), and
- Vinh Tan 4 Coal-Fired Power Plant (1,200 MW).

Challenges of PPP progress in the energy sector are presented in Table 12.20.

Table 12.20: Challenges of PPP Progress in the Energy Sector in Viet Nam

Challenges	Currently Implemented Tackling Measures
Low electricity tariffs	In an effort to stimulate interests from the private sector, the Ministry of Industry and Trade and EVN have been working to increase retail electricity prices and to gradually liberalize the power sector.
Dominance of the state-owned enterprises, especially EVN, in the whole power supply chain	<p>In 2011, the government commenced implementing its phased approach of liberalizing the power sector and introducing competition in the power generation market.</p> <p>It remains unclear quite how far Viet Nam will go with its plan to create a competitive and more transparent power market, one in which the state plays a less dominant role. Officials at EVN and other state-owned power producers benefit from state regulation, sometimes through corrupt practices, even as the companies they work for lose money. They have a vested interest in blocking structural reform.</p>

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Table 12.20 *continued*

Challenges	Currently Implemented Tackling Measures
<p>There had been a change in the provision of currency conversion government guarantees for BOT thermal power projects.</p> <p>The Official Letter 136 dated 16 April 2015 of the deputy prime minister signaled the government's intention to limit the support that it will give to BOT power projects for currency conversion in Viet Nam. Basically, the Government of Viet Nam is prepared to guarantee the conversion into United States dollars of up to 30% of project turnover in dong after subtracting dong-denominated expenses (e.g., dong-denominated operating costs or financing costs, if any).</p>	
<p>Private power projects in Viet Nam have to face a complex structure of government agencies, a situation which becomes even more difficult for small-scale ones, because of the lack of a standardized power purchase agreements. Most projects have to be negotiated on a case-by-case basis.</p>	
<p>In the case of foreign investment, BOT is preferred to build-own-operate schemes. It is also acknowledged that the government would prefer foreign investors to engage in joint ventures with local companies or subsidiaries of a Viet Nam utility.</p>	
<p>The Ministry of Industry and Trade guidelines suggest that the internal rate of return in respect of equity capital may be capped at 14%. However, this number may be exceeded by providing a satisfactory explanation in the project evaluation and negotiation stage.</p>	
<p>For thermal energy projects, it is evident that state-owned enterprises Vinacoal and PetroVietnam are allowed to propose thermal independent power producer projects to EVN with competitive advantage over other developers as they are the monopoly entities in the coal and gas fuel supply, respectively.</p>	

BOT = build-operate-transfer, EVN = Vietnam Electricity, PPP = public-private partnership.

Source: Mott MacDonald.

12.7 Water and Wastewater

12.7.1 Regulatory Framework

12.7.1.1 Foreign Investor Participation Restrictions

	2016	2017
Maximum allowed foreign ownership of equity in greenfield projects^a		
Bulk water supply and treatment	100%	100%
Water distribution	100%	100%
Wastewater treatment	100%	100%
Wastewater collection	100%	100%

^a Subject to the approval of the licensing authorities.

12.7.1.2 Government Contracting Agency

Various government offices.

12.7.1.3 Sector-Specific Regulations

Can the private sector be given water abstraction rights?	✓
Are there regulations in place on raw water extraction?	✓
Are there regulations in place on the release of treated effluents?	no data

The exploitation of water resources for domestic water supply by water supply companies must comply with the master plan on water resources, as specified in the Law on Water Resources 2012. Water supply companies must obtain permits from the Ministry of Natural Resources and Environment for the exploitation of raw water for water treatment plants. For smaller projects (50,000 cubic meters/day [surface water] and 3,000 cubic meters/day [groundwater]), the responsibility falls under the control of provincial people's committee.

12.7.1.4 Sector Regulators

Water sector regulatory agencies in Viet Nam are described in Table 12.21.

Table 12.21: Water Sector Regulatory Agencies in Viet Nam

Agency	Function
Ministry of Natural Resources and Environment	Overall water resources management/strategy
Agency of Water Resources Management	Manages water resources at the country level as well as revising the law on water resources
Vietnam Environment Administration	Deals with environmental law and regulation
Ministry of Construction	Responsible for urban water supply, wastewater services, and drainage infrastructure
Ministry of Agriculture and Rural Development	Implements and coordinates rural water supply and sanitation projects and programs as well as responsible for irrigation, drainage, flood and disaster prevention, and fisheries
Ministry of Planning and Investment	Responsible for planning investments in water sector development
Provincial People's Committees	Responsible for policy implementation, and urban water and wastewater projects, planning and proposing domestic and industrial water supply projects to the Government of Viet Nam Make decisions on water tariff increases
Ministry of Finance	Develops policies on water and wastewater tariffs and taxes
Ministry of Health	Development of national standards Drinking water quality control for urban water (rural and small-scale water supplies are dealt with under separate legislation). Drinking water standards are based on World Health Organization standards, adapted for Viet Nam conditions. Monitoring and control of water quality

Source: Mott MacDonald.

12.7.2 Institutional Capacity for Implementation

12.7.2.1 Project Planning

	2016	2017
Have sector strategy and investment priorities been defined?	✓	✓
Is there a PPP project pipeline developed and available?	✓	✓

There are national sector strategies developed for the water and wastewater sector, setting national targets in relation to water and wastewater service coverage and nonrevenue water reduction, which will require significant investment. Despite the seeming lack of clear plans, there are a few projects from a list of national projects calling for foreign investment announced under Decision 631/QĐ-TTg dated 29 April 2014. The PPP pipeline of water projects is shown in Table 12.22.

Table 12.22: PPP Pipeline of Water Projects in Viet Nam

No.	Project Name	Location	Capacity (m ³ /day)	Value (\$ million)
1	Hau River Water Treatment Plant I	Can Tho City	Phase 1: 500,000 Phase 2: 1,000,000	500
2	Hau River Water Treatment Plant II	Chau Thanh	Phase 1: 1,000,000 Phase 2: 2,000,000	1,000
3	Da River Water Treatment Plant Phase 2	Ha Noi	300,000	100
4	Duong River Water Treatment Plant	Ha Noi	Phase 1: 300,000 Phase 2: 600,000	300
5	Nhung River Water Treatment Plant	Quang Tri Province	n/a	30

m³/day = cubic meter per day, n/a = not available, PPP = public-private partnership.

Sources: Government of Viet Nam. 2014. Decision No-631-QĐ-TTg. http://www.vietnam.co.za/downloads/list_of_projects.pdf; Infradeals. Infradeals Database. <https://www.infra-deals.com> (subscription only).

12.7.2.2 Project Preparation

	2016	2017
PPP projects currently in preparation	n/a	no data

The Japan International Cooperation Agency is funding several feasibility studies on water PPPs conducted by Japan-based companies. However, these are likely to be developed through direct negotiation between Japan-based companies and local partners, with support from the foreign ministries of Japan and Viet Nam.

12.7.2.3 Procurement

The tender for Tan Hoa–Lo Gom wastewater treatment PPP was launched in mid-2015.

	1990– 2016	1990– 2017	In 2017
PPP projects procured through:			
Direct appointment	no data	no data	-
Unsolicited bids	-	-	-
Competitive bidding process	no data	no data	-
PPP projects currently in procurement	n/a	n/a	1

12.7.3 Features of Past PPP Projects

12.7.3.1 PPP Projects That Reached Financial Close

	1990– 2016	1990– 2017	In 2017
PPP projects that reached financial close (number)	4	4	-
PPP projects that reached financial close (\$ million)	155	155	-

There have been two greenfield bulk water supply projects and one O&M performance-based nonrevenue water reduction contract.

12.7.3.2 Foreign Investor Participation

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign sponsor participation (number)	3	3	-
PPP projects with foreign sponsor participation (as a share to the total number of water PPP projects)	75%	75%	-

12.7.3.3 Government Support

	1990– 2016	1990– 2017	In 2017
PPP projects that received government support:			
Viability gap fund	no data	no data	-
Government guarantees	no data	no data	-
Availability-/performance-based payment basis	1	1	-

12.7.3.4 Payment Mechanism

	1990– 2016	1990– 2017	In 2017
PPP projects by payment mechanism:			
User-paid contracts	-	-	-
Government-paid contracts	3	3	-

12.7.3.5 Tariffs

Tariff levels are set by provincial people's committees, and these are not linked to any required capital investment program or levels of service. There are also no mechanisms in place to link tariffs to inflation. People's committees are often reluctant to actually increase water tariffs. This happens largely for political reasons despite official policies such as Decree 117/2007, which is intended to promote an increase in water tariffs to achieve full cost-recovery.

Viet Nam employs a block tariff structure. Examples of current water tariff grids in the two major cities of Ha Noi (Table 12.23) and Ho Chi Minh City (Table 12.24) are provided.

Table 12.23: Current Water Tariff Grid in Ha Noi, 2015

Volume	Water (\$/m ³)	Wastewater (\$/m ³)
Up to 10 m ³	0.24	0.02
10–20 m ³	0.28	0.03
20–30 m ³	0.35	0.03
Above 30 m ³	0.64	0.06

m³ = cubic meter.

Notes:

1. Ha Noi Water Supply Co. Ltd. tariffs. Figures exclude value-added tax and environmental protection charges for wastewater.

2. Data for 2017 not available.

Source: IBNET. 2016. IBNET Database. <https://database.ib-net.org/DefaultNew.aspx> (accessed February 2018).

Table 12.24: Current Water Tariff Grid in Ho Chi Minh City, 2015

Volume	Water (\$/m ³)	Wastewater (\$/m ³)
Up to 16 m ³	0.27	0.03
16–24 m ³	0.51	0.05
Above 24 m ³	0.57	0.06

m³ = cubic meter.

Notes:

1. SAWACO tariffs. Figures exclude value-added tax and environmental protection charges for wastewater.

2. Data for 2017 not available.

Source: IBNET. 2017. IBNET Database. <https://database.ib-net.org/DefaultNew.aspx> (accessed February 2018).

12.7.3.6 Risk Allocation

Data not available.

12.7.4 Nonrevenue Water and Infiltration

Nonrevenue water (%)	23%
Nonrevenue water (m ³ /km/day)	13.53
Infiltration	no data

m³/km/day = cubic meter per kilometer per day.

Source: IBNET. 2014. IBNET Database. <https://database.ib-net.org/DefaultNew.aspx> (accessed February 2017).

12.7.5 Local Capabilities

There are few large and leading engineering procurement and construction companies specializing in the water and wastewater market.

12.7.6 Project Financing

	1990– 2016	1990– 2017	In 2017
PPP projects with foreign lending participation	no data	no data	-
PPP projects that received export credit agency/international financing institution support	2	2	-

12.7.7 Challenges

Challenges of PPP progress in the water sector are presented in Table 12.25.

Table 12.25: Challenges of PPP Progress in the Water Sector in Viet Nam

Challenges	Currently Implemented Tackling Measures
Untested new PPP legal framework	
Low tariff levels Tariffs and revenues are inadequate for full cost-recovery, resulting in lack of financial and operational sustainability.	
Capacity of utility management for implementing reforms: this capacity varies enormously between utilities, but even in the most effective ones there is a concern that they need support for change management in the process of transforming from a public utility to an equitized company.	

PPP = public-private partnership.

Source: Mott MacDonald.

12.8 Other Sectors

Potential PPP projects for sectors not covered in the preceding sections are presented in this section.

The PPP pipeline of projects from other sectors is listed in Table 12.26.

Table 12.26: PPP Pipeline of Projects from Other Sectors in Viet Nam

No.	Project Name	Location	Value (\$ million)
1	Da Nang Solid Waste Management PPP	Da Nang	To be decided

Source: Infradeals. Infradeals Database. <https://www.infra-deals.com> (subscription only).

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APPENDIX: METHODOLOGY

A.1 Research Period

The research was carried out from December 2017 to March 2018 with the aim of reflecting the status as of the end of 2017. Therefore, some indicator data may have changed between the said period and the date of report publication.

A.2 List of Indicators

The following tables present a list of indicators for each major topic, including some explanation for certain indicators where it is deemed necessary.

In the tables, an **orange** color string represents an indicator that is based on current policies and regulations, while a **blue** color string represents an indicator that is based on what happens in practice.

A.2.1 Regulatory Framework

Table A.1: Regulatory Framework Country-Level Section Indicators

Subcategory	Supporting Indicators	Units	Comment
PPP laws	Is there a dedicated legal or policy instrument established for a PPP?	yes/ no	
	Cumulative number of PPP projects implemented under the latest PPP law	number	PPP projects that reached financial close since the latest PPP law was enacted and went through preparation and approval process as prescribed in the latest PPP law
PPP types	Number of PPP types defined in the PPP regulations	number	
Eligible sectors	Roads, railways, ports, airports Water and wastewater Municipal solid waste Power generation, power transmission, power distribution, oil and gas	yes/ no	Defines whether a particular infrastructure sector is eligible for PPP procurement under the regulations

Table A.1 continued

Subcategory	Supporting Indicators	Units	Comment
	Information and communication technology Social infrastructure		
Other applicable restrictions	Project funding structure	yes/ no	States if there is any regulated prescription on a PPP project funding structure, for example, debt-equity ratio
	Project capital investment size	yes/ no	States if there is any restriction/relaxing of regulations depending on the total cost of a PPP project
Unsolicited bids	Acceptance of unsolicited proposals	yes/ no	
	Eligibility of project proponent to have:		
	Competitive advantage at bid evaluation	yes/ no	
	Swiss challenge	yes/ no	States if a project proponent that submitted an unsolicited bid has the right to match the best bid offer (when the project is put to competitive tender)
	Compensation of the project development cost	yes/ no	
	Government support for land acquisition and resettlement cost	yes/ no	
	Government support in the form of VGF and guarantees	yes/ no	
Institutional PPPs	Are institutional PPP arrangements allowed (e.g., joint venture between government or SOEs and private firms as an SPV company)	yes/ no	
	Institutional PPP projects (number)	number	Institutional PPP projects that reached financial close
	Institutional PPP projects (as a share to the total number of PPP projects)	%	Institutional PPP projects that reached financial close as a share of the total number of PPP projects that reached financial close

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Table A.1 *continued*

Subcategory	Supporting Indicators	Units	Comment
Land rights	Which of the following is permitted to the private partner?		
	Transfer land lease/use/ownership rights to the third party	yes/ no	
	Use leased/owned land as collateral	yes/ no	
	Mortgage leased/owned land	yes/ no	
	Is there any legal mechanism for granting wayleave rights, for example, laying water pipes or fiber cables over land occupied by persons other than government or the private partner?	yes/ no	
	Is there a land registry/cadastre with public information on land plots?	yes/ no	
	Which of the following information on land plots is available to the private partner?		
	Appraisal of land value	yes/ no	
	Landowners	yes/ no	
	Land boundaries	yes/ no	
	Utility connections	yes/ no	
	Immovable property on land	yes/ no	
	Plots classification	yes/ no	

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Table A.1 continued

Subcategory	Supporting Indicators	Units	Comment
Environmental and social issues	Is there any local regulation establishing process for environmental compliance?	yes/ no	
	Can the private partner limit environmental liability for what is outside of its control or caused by third parties?	yes/ no	Reflects whether a private partner can limit the circumstances where it is penalized for breaching environmental standards where such a breach is not within its control—for example, a wastewater treatment plant operator will wish to avoid prosecution or even liability for pollution caused by a pollutant in the influent which the treatment plant cannot treat or will at least want to have the power to pursue the polluter to stop the pollution and/or obtain compensation
	Is there any local regulation establishing process for social compliance?	yes/ no	
	Is there any involuntary land clearance for PPP projects?	yes/ no	Reflects whether land expropriation is possible for PPP projects
Foreign investor participation restriction	Maximum allowed foreign ownership of equity in greenfield projects	%	Statutory restrictions on foreign ownership of equity in new investment projects. The data present a standard case, that is, assumes that the host country does not enjoy any special economic, trade, or investment relationship with the home country of the foreign investor that would affect the investor's ownership rights (i.e., the home country is not part of an economic union or a cooperation block with the home country, such as the Association of Southeast Asian Nations, etc.).
	Are there Any Obstacles for foreign investors on the following?		

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Table A.1 *continued*

Subcategory	Supporting Indicators	Units	Comment
	Land use rights/ownership rights as opposed to similar rights of local investors	yes/ no	
	Currency convertibility	yes/ no	Reflects whether there is any restriction for investors on monetary transfers through regulation of currency convertibility, limiting the extent to which local currency can be converted into foreign currency; conversion rate, controlling the rate that can be obtained for such a transaction
	Cumulative PPP projects with foreign sponsor participation (number)	number	Projects that reached financial close where at least one sponsor was a foreign company. Aggregated from sector data
	Cumulative PPP projects with foreign sponsor participation (as a share to the total number of PPP projects)	%	Projects that reached financial close where at least one sponsor was a foreign company as a share of the total number of PPP projects that reached financial close. Aggregated from sector data
Dispute resolution and enforcement mechanism	Can foreign law be chosen to govern PPP contracts?	yes/ no	
	What dispute resolution mechanisms are available for PPP agreements?		
	Court litigation	yes/ no	
	Local arbitration	yes/ no	
	International arbitration	yes/ no	
	Has the country signed the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards?	yes/ no	

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Table A.1 continued

Subcategory	Supporting Indicators	Units	Comment
Lender's security rights	Security over the project assets	yes/ no	<p>In the assessment, the following approach was used:</p> <ul style="list-style-type: none"> If the regulations are silent on the possibility of lender's security rights, then indicator is marked ✖ and in red. If the regulations are silent on the possibility of lender's security rights, but there have been known precedents in the past, and it can be negotiated at a contract level, then the indicator is marked ✓ and in yellow. <p>If the regulations expressly have provisions on lender's security rights, then the indicator is marked ✓ and in green</p>
	Security over the land on which they are built	yes/ no	
	Security over the shares of PPP project company	yes/ no	
	Possibility for direct agreement between government and lenders	yes/ no	
	Priority of lenders in case of insolvency	yes/ no	
	Step-in rights of lenders	yes/ no	
Termination and compensation	Does the law enable compensation payment to the private partner in case of early termination due to:		<p>In the assessment, the following approach was used:</p> <ul style="list-style-type: none"> If the regulations are silent on the possibility of compensation payment, then the indicator is marked ✖ and in red. If the regulations are silent on the possibility of compensation payment, but there have been known precedents in the past, and it can be negotiated at a contract level, then the indicator is marked ✓ and in yellow. If compensation payment is expressly regulated, then the indicator is marked ✓ and in green
	Public sector default or termination for reasons of public interest	yes/ no	
	Private sector default	yes/ no	
	Force majeure	yes/ no	
	Does law enable the concept of economic/financial equilibrium?	yes/ no	
	Does law enable compensation payment to private partner due to:		
	Material adverse government action	yes/ no	
	Force majeure	yes/ no	
	Change in law	yes/ no	

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Table A.1 continued

Subcategory	Supporting Indicators	Units	Comment
Government support	Is a project development fund available?	yes/ no	
	Land acquisition support	yes/ no	
	Resettlement and/or compensation cost to residents at the project site	yes/ no	
	Imposed limits on time frame to complete land acquisition (day)	days	
	Is there any dedicated agency to streamline land acquisition?	yes/ no	
	Exemption from land use/land rental fees	yes/ no	
	VGF	yes/ no	
	Limits to VGF as a percentage of projects capital cost	%	
	Government guarantees		<p>In the assessment, the following approach was used:</p> <ul style="list-style-type: none"> • If the regulations are silent on the possibility of provision of guarantees and/or certain type of guarantee, then the indicator is marked ✖ and in red • If the regulations are silent on the possibility of provision of guarantees and/or certain type of guarantee, but there have been known precedents in the past where projects were received irrespective of the type of guarantee, then the indicator is marked ✓ and in yellow • If the regulations explicitly have provisions for guarantees, then the indicator is marked ✓ and in green
	Currency inconvertibility and transfer risk	yes/ no	
	Foreign exchange risk	yes/ no	
	War and civil disturbance risk	yes/ no	

continued on next page

Table A.1 continued

Subcategory	Supporting Indicators	Units	Comment
	Breach of contract risk	yes/ no	
	Regulatory risk	yes/ no	
	Expropriation risk	yes/ no	
	Government payment obligation guarantee	yes/ no	
	Credit guarantees	yes/ no	Guarantees of debt repayment to lenders
	Minimum demand/revenue guarantee	yes/ no	
	Availability-/performance-based payment contracts	yes/ no	
	Tax subsidies	yes/ no	
	Cumulative PPP projects received government support:		Cumulative number of PPP projects that reached financial close and received respective types of government support. Aggregated from sector data
	VGF	number	
	Government guarantees	number	
	Availability-/performance-based payment contracts	number	
Standard contracts	What standardized contracts are available and used in the market?		Contracts with standard structure, key terms defined in the contract, ways of addressing key risks accepted by the market, and therefore contracts which will not require extensive negotiation
	PPP/concession agreement	yes/ no	
	Power purchase agreement	yes/ no	
	Capacity take-or-pay contract	yes/ no	
	Fuel supply agreement	yes/ no	

continued on next page

Table A.1 *continued*

Subcategory	Supporting Indicators	Units	Comment
	Transmission and use of system agreement	yes/ no	
	Performance-based operation and maintenance contract	yes/ no	
	Engineering procurement and construction contract	yes/ no	

PPP = public-private partnership, SOE = state-owned enterprise, SPV = special purpose vehicle, VGF = viability gap fund.

A.2.2 Institutional Capacity for Implementation

Table A.2: Institutional Capacity for Implementation Country-Level Section Indicators

Subcategory	Supporting Indicators	Units	Comment
Institutional setup	Is there a specialized government agency established for PPP purposes (e.g., PPP Unit)?	yes/ no	
	If yes, what role does this PPP unit have?		
	Guidance to and coordination between other government agencies	yes/ no	
	Supporting (e.g., PPP project preparation, appointment of advisers, running PDF)	yes/ no	
	Appraisal of PPP project feasibility studies	yes/ no	
	Approval of PPP project	yes/ no	
	Procurement	yes/ no	
	Managing, monitoring, and enforcing ongoing PPP contracts	yes/ no	
Project planning	Is there a PPP project pipeline developed and available?	yes/ no	
	Is the preliminary selection of PPP projects consistent with public investment prioritization?	yes/ no	
	Is there a screening/identification methodology to identify a list of potential PPP projects from public investment priority projects?	yes/ no	

continued on next page

Table A.2 continued

Subcategory	Supporting Indicators	Units	Comment
Project preparation	Number of project appraisal stages	number	Reflects the prescribed number of project preparation stages to be undertaken by the public sector before procurement can commence (e.g., outline business case followed by business case would give two project appraisal stages)
	What feasibility analyses are required for the project to be approved as a PPP?		
	Technical feasibility	yes/ no	
	Financial feasibility	yes/ no	
	Legal feasibility	yes/ no	
	Environmental and social sustainability	yes/ no	
	Value for money assessment	yes/ no	
	Fiscal affordability assessment	yes/ no	
	PPP structuring and risk allocation	yes/ no	
	Initial market testing	yes/ no	

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Table A.2 continued

Subcategory	Supporting Indicators	Units	Comment
	Is the approval from the Ministry of Finance or equivalent required before commencement of procurement?	yes/ no	
	Number of approvals to be obtained in the public sector to get the final go-ahead to commence PPP project procurement	yes/ no	
	Is it a normal practice to appoint independent, international, and qualified advisors to assist the government with project preparation?	yes/ no	
Risk allocation	Preferred risk allocation matrix as reference	yes/ no	Reflects whether there is a guidance document developed detailing typical risks and preferred risk allocation in a PPP contract
Procurement	Is competitive bidding the only method for PPP partner selection?	yes/ no	
	In case of a competitive tender:	yes/ no	
	Is prequalification required?	yes/ no	
	Minimum time allowed to submit prequalification/ expression of interest (day)	days	
	Minimum time allowed to submit proposals (day)	days	
	Is negotiation available?	yes/ no	
	Is there a process allowing unsuccessful bidders to challenge the award/file complaints?	yes/ no	
	Maximum time allowed to submit a complaint starting from announcement of the preferred bidder	days	
	Maximum time limit from the bid closing date until selection of the preferred bidder	days	
	Maximum time limit from selection of the preferred bidder until signing the contract	days	
	Transparency. Which of the following is published?		

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Table A.2 *continued*

Subcategory	Supporting Indicators	Units	Comment
	Procurement notice	yes/ no	
	Q&A during bid clarification stage	yes/ no	
	Evaluation results	yes/ no	
	Award notice	yes/ no	
	Contract	yes/ no	
	Confidentiality	yes/ no	Reflects whether the public sector has a legal obligation to bidders to keep the submitted information confidential

PDF = project development fund, PPP = public–private partnership, Q&A = question and answer.

A.2.3 PPP Market Maturity

Table A.3: PPP Market Maturity Country-Level Section Indicators

Supporting Indicators	Units	Comment
Cumulative PPP projects that reached financial close	number	<p>PPP projects that reached financial close since 1990. PPP is considered in a wide context as per Asian Development Bank's definition (please refer to the Definition section of this report)</p> <p>Excludes:</p> <ul style="list-style-type: none"> • projects cancelled/stalled; • refinancing transactions; and • full/partial privatizations, divestures, company/asset acquisitions. <p>Aggregates data from sectors and are sourced from the World Bank PPI and IJGlobal databases and Mott MacDonald internal knowledge</p>

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Table A.3 *continued*

Supporting Indicators	Units	Comment
Cumulative PPP projects currently in preparation	number	Aggregates data from sectors and reflects the status as of 31 December 2017 Preparation stage refers to the period when the government is in the process of undertaking studies on the project (PFS, FS, OBC, etc.), that is, project goes beyond initial announcement on the PPP pipeline but before the procurement notice is published Aggregates data from sectors and are mainly sourced the from IJGlobal Database complemented by available information on government websites. Projects not found in these sources may not be reflected
Cumulative PPP projects currently in procurement	number	Aggregates data from sectors and reflects the status as of 31 December 2017 Procurement stage refers to the period between the publication of the procurement notice and project award. Mainly sourced from the IJGlobal database complemented by available information on government websites. Projects not found in these sources may not be reflected

OBC = outline business case, PFS = prefeasibility study, PPI = private participation in infrastructure, PPP = public-private partnership.




A.2.4 Financial Facilities

Table A.4: Financial Facilities Country-Level Section Indicators

Supporting Indicators	Units	Comment
Availability of nonrecourse/limited recourse hard currency loan	yes/no	Sourced from consultations with banks and publicly available information regarding PPP project financing
Maximum tenor	years	Same sources Assumed: <div><div>More than 10 years</div><div>6–10 years</div><div>0–5 years</div></div>










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Table A.4 continued

Supporting Indicators	Units	Comment						
Availability of nonrecourse/ limited recourse local currency loan	yes/no	Sourced from consultations with banks and publicly available information regarding PPP project financing						
Maximum tenor	years	Same sources Assumed: <table><tr><td>More than 10 years</td><td></td></tr><tr><td>6–10 years</td><td></td></tr><tr><td>0–5 years</td><td></td></tr></table>	More than 10 years		6–10 years		0–5 years	
More than 10 years								
6–10 years								
0–5 years								
Availability of interest rate swaps	yes/no	Sourced from consultations with banks and publicly available information regarding PPP project financing						
Forward duration of interest rate swap	years	Same sources Assumed: <table><tr><td>More than 10 years</td><td></td></tr><tr><td>6–10 years</td><td></td></tr><tr><td>0–5 years</td><td></td></tr></table>	More than 10 years		6–10 years		0–5 years	
More than 10 years								
6–10 years								
0–5 years								
Availability of currency swaps	yes/no	Sourced from consultations with banks and publicly available information regarding PPP project financing						
Forward duration of currency conversion rate swap	years	Same sources Assumed: <table><tr><td>More than 10 years</td><td></td></tr><tr><td>6–10 years</td><td></td></tr><tr><td>0–5 years</td><td></td></tr></table>	More than 10 years		6–10 years		0–5 years	
More than 10 years								
6–10 years								
0–5 years								
Project financing through project bond issuance	yes/no	Sourced from consultations with banks and publicly available information regarding PPP project financing						
Typical D:E ratio	ratio	Debt/Equity (D:E) Ratio is calculated by dividing a company's total liabilities by its stockholders' equity and is a debt ratio used to measure a company's financial leverage. The D:E ratio is also referred to as gearing ratio. Sourced from consultations with banks and publicly available information regarding PPP project financing						

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Table A.4 *continued*

Supporting Indicators	Units	Comment						
Timeline to financial close (from project award/ issue of letter of intent by government authority)	months	<p>Sourced from consultations with banks and publicly available information regarding PPP project financing</p> <p>Assumed:</p> <table><tr><td>More than 10 years</td><td></td></tr><tr><td>6–10 years</td><td></td></tr><tr><td>0–5 years</td><td></td></tr></table>	More than 10 years		6–10 years		0–5 years	
More than 10 years								
6–10 years								
0–5 years								
Minimum DSCR covenant levels	value	<p>Debt-service coverage ratio (DSCR) is calculated as:</p> <p>DSCR = Net Operating Income / Total Debt Service</p>						
Cumulative PPP projects with foreign lending participation	number	<p>Projects that reached financial close where at least one lender was foreign</p> <p>Sourced from both the World Bank PPI Database and IJGlobal Database, so projects not in these databases may not be reflected</p>						
Cumulative PPP projects received ECA/ IFI financing	number	<p>Projects that reached financial close where ECA or IFI has provided part or all of the project financing or certain guarantees</p> <p>Aggregated from sector data and sourced from both the World Bank PPI Database and IJGlobal Database, so projects not in these databases may not be reflected</p>						

ECA = export credit agency, IFI = international financing institution, PPI = private participation in infrastructure, PPP = public–private partnership.

A.2.5 Sector Indicators

Generally, the structure of indicators is uniform for all sectors; however, there are some unique sector indicators in such subcategories as sector regulations and features of past public–private partnership (PPP) projects. The common sector-level section indicators are presented below.

Table A.5: Sector-Level Section Indicators

Subcategory	Supporting Indicators	Units	Comment
Regulatory Framework			
Foreign investor participation restriction	Maximum allowed foreign ownership of equity in greenfield projects	%	Statutory restrictions on foreign ownership of equity in new investment projects. The data present standard case, that is, assumes that the host country does not enjoy any special economic, trade, or investment relationship with the home country of the foreign investor that would affect the investor's ownership rights (i.e., the home country is not part of an economic union or a cooperation block with the home country, such as the Association of Southeast Asian Nations).
Government contracting agency	None		Government agency authorized to enter into a PPP contract in the sector
Sector regulations	Depending on the sector		Write-up on key sector regulations
Sector regulators	None		Write-up on key regulatory agencies for the sector
Standard contracts	What standardized contracts are available and used in the market?		Contracts with standard structure, key terms to be defined in the contract, ways of addressing key risks accepted by the market, and which therefore will not require extensive negotiation
	PPP/concession agreement	yes/ no	
	Power purchase agreement	yes/ no	
	Water purchase agreement	yes/ no	
	Capacity take-or-pay contract	yes/ no	
	Fuel supply agreement	yes/ no	

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Table A.5 *continued*

Subcategory	Supporting Indicators	Units	Comment
	Transmission and use of system agreement	yes/ no	
	Performance-based operation and maintenance contract	yes/ no	
	Engineering procurement and construction contract	yes/ no	
Institutional Capacity for Implementation			
Project planning	Have sector strategy and investment priorities been defined?	yes/ no	
	Is there a PPP project pipeline developed and available?	yes/ no	
Project preparation	Number of PPP projects currently in preparation	number	Reflects the status as of 31 December 2016 and 2017 Preparation stage refers to the period when the government is in the process of doing some studies on the project (PFS, FS, OBC, etc.), that is, the project goes beyond just being announced on the pipeline, but before the procurement notice is published Mainly sourced from the IJGlobal Database, complemented by available information on government websites, so projects not in these databases may not be reflected
Procurement	PPP projects procured through:	number	Counts PPP projects that reached financial close over 1990–2016 and 1990–2017 that were procured by respective method
	Direct appointment	number	World Bank PPI Database
	Unsolicited bids	number	World Bank PPI Database and government websites
	Competitive bidding process	number	World Bank PPI Database, IJGlobal Database
	License scheme	number	Only applicable for energy projects. Sourced from the World Bank PPI Database
	PPP projects currently in procurement	number	Reflects the status as of 31 December 2017

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Table A.5 continued

Subcategory	Supporting Indicators	Units	Comment
			Procurement stage refers to the period between the publication of the procurement notice and project award. Mainly sourced from the IJGlobal Database, complemented by available information on government websites. Projects not contained in these sources may not be reflected.
Features of Past PPP Projects			
PPP projects that reached financial close	PPP projects that reached financial close	number (\$)	<p>Includes PPP projects that reached financial close over 1990–2016, 1990–2017 and in 2017. PPP is considered in a wide context as per Asian Development Bank's definition (please refer to the Definition section of this report).</p> <p>Excludes:</p> <ul style="list-style-type: none"> projects cancelled/stalled; refinancing transactions; full/partial privatizations, divestures, and company/asset acquisitions. <p>Sourced from both the World Bank PPI Database and IJGlobal Database</p> <p>Expressed both in numbers and total investment value</p> <p>Total investment value is the sum of investment values of individual projects recorded in millions of United States dollars in either the year of financial closure or the year of investment</p>
Foreign investor participation	PPP projects with foreign sponsor participation (number and as a share to the total number of PPP projects that reached financial close in the sector)	number (\$)	<p>Projects that reached financial close over 1990–2016, 1990–2017, and in 2017 and where at least one sponsor was a foreign company</p> <p>Sourced from both the World Bank PPI Database and IJGlobal Database, so projects not in these databases may not be reflected</p>
Government support	PPP projects that received government support:		Projects that reached financial close over 1990–2016, 1990–2017, and in 2017 and received respective type of government support

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Table A.5 *continued*

Subcategory	Supporting Indicators	Units	Comment
	VGF	number	Although some data are available from World Bank PPI Database, the extent is limited. So, this may be an underestimate of the actual number. Data have been gathered based on Mott MacDonald internal knowledge of known cases of this type of support.
	Government guarantees	number	Sourced from the World Bank PPI Database
	Projects on availability/performance payment basis	number	Sourced from the World Bank PPI Database
Payment mechanism	PPP projects by payment mechanism:	number	
	User-paid contracts	number	Projects that reached financial close over 1990–2016, 1990–2017, and in 2017 with payment to the private partner coming directly from the users (people) of the infrastructure/services Sourced from the World Bank PPI Database
	Government-paid contracts	number	Projects that reached financial close over 1990–2016, 1990–2017, and in 2017 with payment to the private partner coming from the public sector. In the energy sector, projects with payment from government offtakers (utilities) is also considered in this category Sourced from the World Bank PPI Database
	What additional revenue streams are allowed?		Indicators depend on a sector
Tariffs	Average tariff levels	\$	
Risk allocation	Typical risk allocation arrangements matrix	n/a	Only risks that typically require negotiation are presented Risks that have straightforward allocation in a PPP (e.g., construction risk, operation risk) are not listed Information sourced from consultation with Mott MacDonald sector experts

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Table A.5 *continued*

Subcategory	Supporting Indicators	Units	Comment
Local Capabilities			
	None		Describes the maturity and availability of the local players in a sector
Project Financing			
	PPP projects with foreign lending participation		Projects that reached financial close over 1990–2016, 1990–2017, and in 2017 where at least one lender was foreign Sourced from both the World Bank PPI Database and IJGlobal Database
	PPP projects that received ECA/IFI support	number	Projects that reached financial close over 1990–2016, 1990–2017, and in 2017 where ECA or IFI has provided part or all of the project financing or certain guarantees Sourced from both the World Bank PPI Database and IJGlobal Database
Challenges			
	Write-up on challenges and currently implemented tackling measures		

n/a = not available, ECA = export credit agency, IFI = international financing institution, OBC = Outline Business Case, PFS = prefeasibility study, PPI = Private Participation in Infrastructure, PPP = public–private partnership, SOE = state-owned enterprise, VGF = viability gap fund.

A.3 Comment on Financial Indicators

With regard to indicative loan terms provided in the report, it should be noted that it is very difficult to generalize about loan terms. Generally, international banks will be providing project finance in hard currency. The terms will be broadly consistent between countries, given other risk factors are held constant, as country risk is only one risk factor. In general, some of the factors that determine pricing are as follows:

- exposure to market/revenue risk;
- exposure to foreign exchange risk;
- credibility of offtaker;
- credibility of sovereign;
- availability of export credit/multilateral support;
- “proven-ness” of sector and underlying technology; and
- financing market (i.e., Lehman shock) and regulations (i.e., Basel III).

It is understood in project finance that lenders take all securities including security over the “rights” of the concessionaire to operate the asset and collect revenue. The stability of the revenue stream is most important, and most international lenders will require a sovereign guarantee from the Ministry of Finance for the paying authority’s obligations. In addition, from a commercial bank’s perspective, such sovereign guarantee has to be further guaranteed/insured by export credit agencies and/or multilateral lending agencies.

In general, local banks lending in local currency will have less stringent requirements on a project; however, they will also offer a higher financing cost. From previous market sounding, local banks can generally cope with higher debt–equity ratios, lower debt–service coverage ratio, and no explicit sovereign guarantee where international lenders would require it. They can also cope with some level of revenue and fare risk where international banks demand a guaranteed offtake for greenfield projects.

Also, very often banks have the appetite and capacity to finance PPP projects; however, the lack of well-prepared and structured projects limits the progress.

A.4 Comment on the Data Sources

The research was carried out using publicly available sources, including

- developing member countries’ government websites and reports;
- applicable laws and regulations (where regulations were available only in local language, unofficial translation versions have been used);
- Asian Development Bank (ADB) publications;
- publications (including online databases) by other multilateral development agencies;
- industry publication and database (IJGlobal Project Finance and Infrastructure Journal); and
- industry publications by reputable consultancy companies.

In addition, the research has been informed by internal knowledge of Mott MacDonald’s and ADB’s staff, and contributing legal companies and commercial banks.

It should be noted that as the research relied primarily on information reported in public sources which has not been verified by the authors and may not be accurate or contain all the required information, there is the risk of inaccuracy and incompleteness depending on the reliability of sources and the validity of the information used.

For quantitative indicators relating to the number of projects where there were gaps, the total number of cases has been reported based on the limited information available. Therefore, reported numbers of projects in this report may be an underestimate.

Public–Private Partnership Monitor

Second Edition

The second edition of the Public-Private Partnership Monitor builds on the first edition and expands its scopes to include three additional developing member countries. The PPP Monitor presents information on the current status of the PPP environment in 12 ADB DMCs: Bangladesh, Georgia, India, Indonesia, Kazakhstan, Pakistan, Papua New Guinea, the People's Republic of China, the Philippines, Sri Lanka, Thailand and Viet Nam. It assesses about 200 quantitative and qualitative indicators, divided into four main categories: Regulatory Framework, Institutional Capacity for Implementation, PPP Market Maturity, and Financial Facilities. PPP Monitor aims to act as a policy tool to create a dialogue between the public and private sector, provide an enabling environment for PPPs in their respective countries.

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ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 68 members—49 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.



ASIAN DEVELOPMENT BANK

6 ADB Avenue, Mandaluyong City

1550 Metro Manila, Philippines

www.adb.org