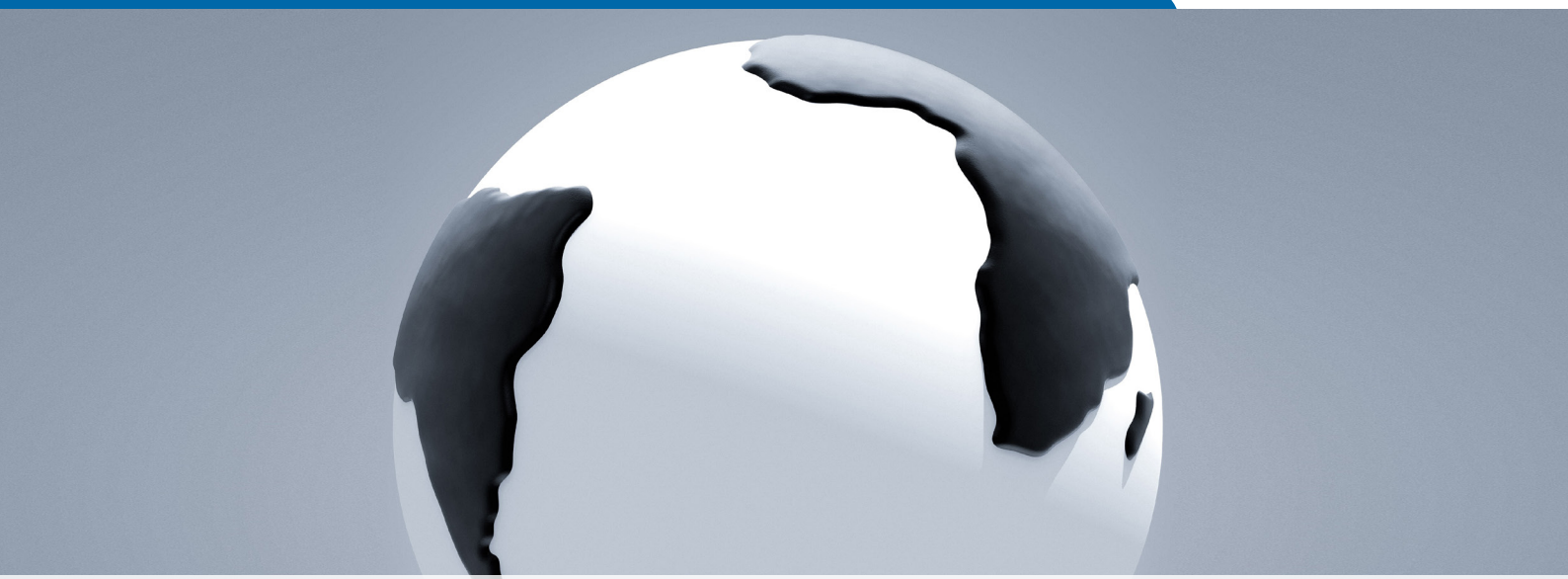
Marhold, Anna

Book

Fossil fuel subsidy reform in the WTO : options for constraining dual pricing in the multilateral trading system

Provided in Cooperation with:
International Centre for Trade and Sustainable Development (ICTSD), Geneva

Reference: Marhold, Anna (2017). Fossil fuel subsidy reform in the WTO : options for constraining dual pricing in the multilateral trading system. Geneva, Switzerland : ICTSD.



Fossil Fuel Subsidy Reform in the WTO:

Options for Constraining Dual Pricing in the Multilateral Trading System

Anna Marhold

ICTSD

International Centre for Trade and Sustainable Development

Issue Paper

Fossil Fuel Subsidy Reform in the WTO:

Options for Constraining Dual Pricing in the Multilateral Trading System

Anna Marhold
Tilburg Law and Economics Center (TILEC), Tilburg University, Netherlands

ICTSD

International Centre for Trade and Sustainable Development

Issue Paper

Published by

International Centre for Trade and Sustainable Development (ICTSD)
International Environment House 2
7 Chemin de Balexert, 1219 Geneva, Switzerland

Tel: +41 22 917 8492
ictsd@ictsd.ch

Fax: +41 22 917 8093
www.ictsd.org

Publisher and Chief Executive: Ricardo Meléndez-Ortiz
Senior Associate: Ingrid Jegou
Programme Officer: Sonja Hawkins
Junior Programme Officer: Björn Dupong

Acknowledgements

This paper is produced by the ICTSD Programme on Climate and Energy and is part of the E15 Initiative Engagement track on disciplining fossil fuel subsidies.

The author wishes to thank Gary Horlick, Ingrid Jegou, Rob Howse, Ricardo Meléndez-Ortiz, Bjorn Dupong, and Vasyl Chornyi for their indispensable input to the preparation of this paper. The author is also grateful for suggestions and/or valuable comments received by participants present during two "Dialogues with WTO Delegates" workshops on the theme of fossil fuel subsidy reform organised by ICTSD in the framework of the E15 Initiative, in June and September 2017.

ICTSD is grateful for the generous support from its core donors including the UK Department for International Development (DFID); the Swedish International Development Cooperation Agency (SIDA); the Ministry of Foreign Affairs of Denmark (Danida); and the Netherlands Directorate-General of Development Cooperation (DGIS).

ICTSD welcomes feedback on this publication. This can be sent to Sonja Hawkins (shawkins@ictsd.ch) or Fabrice Lehmann, ICTSD's Executive Editor (flehmann@ictsd.ch).

Citation: Marhold, Anna. 2017. *Fossil Fuel Subsidy Reform in the WTO: Options for Constraining Dual Pricing in the Multilateral Trading System*. International Centre for Trade and Sustainable Development (ICTSD).

ISSN 2225-6679

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

ADA	Anti-Dumping Agreement
ADD	anti-dumping duty
ASCM	Agreement on Subsidies and Countervailing Measures
CO_2	carbon dioxide
CVD	countervailing duty
DCFTA	Deep and Comprehensive Free Trade Agreement
EC	European Communities
EU	European Union
FFS	fossil fuel subsidies
FFFSR	Friends of Fossil Fuel Subsidy Reform
G7	Group of Seven advanced economies
G20	Group of Twenty major economies
GATT	General Agreement on Tariffs and Trade
GBER	General Block Exemption Regulation
MC11	Eleventh WTO Ministerial Conference
OECD	Organisation for Economic Co-operation and Development
OPEC	Organization of the Petroleum Exporting Countries
SDG	Sustainable Development Goal
STE	state trading enterprise
TTIP	Transatlantic Trade and Investment Partnership
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
WTO	World Trade Organization

FOREWORD

Two years after the world's governments adopted the Paris Agreement on climate change and the 2030 Agenda for Sustainable Development, climate action has reached a crossroads. While the United States, the largest carbon emitter, has expressed its intent to leave the Paris Accord, climate change is becoming increasingly pronounced. The international community's need to act on climate change and reduce emissions is thus more urgent than ever.

The use of fossil energy remains the biggest cause of greenhouse gas emissions. Addressing the climate challenge therefore requires a shift from fossil fuel production and consumption to clean energy use and increased energy efficiency. In practice, however, all major economies continue to subsidise the exploration, processing, and use of fossil fuels, thereby undermining the prospects of a speedy transition.

Members of the G20, G7, and Asia-Pacific Economic Cooperation have committed to phasing out inefficient fossil fuel subsidies and the international community has introduced relevant provisions to this end in the Paris Agreement and the Sustainable Development Goals. Progress to implement these commitments has been slow however. What appears to be missing is a legally binding tool for disciplines.

The multilateral trading system has an important role to play in this context. With the binding nature of its agreements and its effective enforcement mechanism, the World Trade Organization (WTO) could make a difference if members agreed on international rules that discipline the use of fossil fuel subsidies.

It is against this background that ICTSD, through a series of analytical papers and dialogues, seeks to explore options on how to strengthen the international trade system to assume the challenge of climate change by disciplining fossil fuel subsidies. As part of this endeavour, Anna Marhold, Assistant Professor of International and European Law at Tilburg University, has authored the present paper, discussing energy dual pricing in the broader context of fossil fuel subsidy reform and exploring avenues to constrain the practice within the framework of the WTO.

The analysis has been informed by a series of workshops held in Geneva with trade delegates in 2016–17 and builds on work undertaken by the joint ICTSD-World Economic Forum's E15 Initiative. It serves as a basis for the continuation of the project, which aims to outline options and lessons for disciplining fossil fuel subsidies through the trade system and to inform the deliberations of trade and climate delegates and policymakers towards a more sustainable future.

Ricardo Meléndez-Ortiz
Chief Executive, ICTSD

EXECUTIVE SUMMARY

Dual pricing is a practice through which resource-endowed states sell their energy resources at significantly lower prices on the domestic market compared to the price on the export market. Dual pricing could be considered an environmentally harmful fossil fuel subsidy: states that maintain dual-pricing policies are not incentivised to curb their CO_2 emissions, but are instead encouraged to keep burning "cheap" fossil fuels through below global market domestic prices, to the detriment of switching to cleaner forms of energy.

This paper discusses the practice of dual pricing in the broader context of fossil fuel subsidy reform. In view of climate change mitigation, the World Trade Organization (WTO) should contribute to this reform and play an active role in curbing and phasing out such environmentally harmful subsidies. The paper explores avenues for constraining dual pricing within the framework of the WTO by proposing options under existing rules, as well as suggesting changes to the system beyond current WTO rules.

The piece suggests that WTO members wishing to take action against dual-pricing policies maintained by other members could explore bringing a case to dispute settlement on the basis of specific provisions under the General Agreement on Tariffs and Trade (GATT), the Agreement on Subsidies and Countervailing Measures (ASCM) and/or the Anti-Dumping Agreement (ADA). Bringing a case would send a strong signal that dual-pricing policies are not immune to being challenged in a WTO dispute. Moreover, it is likely that this would function as a trigger to rapidly include talks on broader fossil fuel subsidy reform on the WTO agenda.

Beyond existing rules, WTO members should consider revisiting the negotiation of a prohibition of dual pricing within the WTO legal framework. This could be part of larger efforts to reform subsidy rules. Although efforts to include a prohibition on dual pricing have been unsuccessful in the past, momentum has been created by climate change mitigation commitments and the 2030 United Nations Sustainable Development Goals (SDGs). Recent accomplishments by the European Union (EU) in tackling dual pricing also serve as a successful example: the topic of prohibiting dual pricing has, for instance, been included in Transatlantic Trade and Investment Partnership (TTIP) negotiations. An actual prohibition of dual pricing has been taken up in the recent EU-Ukraine Deep and Comprehensive Free Trade Agreement.

Apart from using the multilateral trading system to curb dual pricing, its negative environmental effects can be offset by creating more policy space for green energy. For this, a more sophisticated redrafting and rethinking of current subsidy rules is essential. The WTO could take inspiration from the instruments the EU provides for its member states to this end, such as the Guidelines and Block Exemptions for green energy.

While these may be solutions for the longer term, at present it is crucial that members of the WTO include the topic of phasing out fossil fuel subsidies on its agenda as soon as possible. One way of ensuring this would be to issue a Ministerial Declaration during the upcoming 11th WTO Ministerial Conference (MC11), stressing the importance of fossil fuel subsidy reform in view of climate change mitigation.

1. INTRODUCTION

This paper discusses the practice of energy dual pricing in the broader context of fossil fuel subsidy reform. The World Trade Organization should contribute to this reform and play an active role in curbing and phasing out such environmentally harmful subsidies in view of mitigating climate change. Therefore, the paper approaches dual pricing from the angle of environmentally harmful fossil fuel subsidies. The contribution explores ways to constrain dual pricing within the framework of the WTO in two manners: by proposing options under existing rules, as well as suggesting changes to the system beyond WTO the current legal toolkit.

Energy dual pricing is a practice through which resource-endowed states, for instance through their monopolistic state trading enterprises, sell their energy resources at significantly lower prices on the domestic market compared to the price on the export market and/or the prevailing global market price for the commodity in question.[1] It is in effect a multi-tier pricing system, through which domestic prices are kept artificially low vis-à-vis the export price for the commodity in question. Dual-pricing policies are most commonly applied by resource-rich states possessing large quantities of geographically unevenly distributed energy commodities for which the demand is, overall, high and constant. These factors combined allow a state using these policies to exercise its market power (UNCTAD 2000, 16; Fliess and Mård 2012, 24). Prime examples of resources subject to dual pricing are coal, natural gas and petroleum; however, historically, dual pricing has been applied to other (raw) materials as well.[2] The main rationale for states to maintain dual-pricing policies is to provide their energy-intensive industries with cheap fuel inputs, thereby gaining an advantage over competitors.[3] Concrete examples of dual-pricing policies are those that have been administered by Russia, Ukraine and countries in the Organization of the Petroleum Exporting Countries (OPEC), notably Saudi Arabia (Pogoretskyy 2009; Tarr and Thomson 2004; Pogoretskyy and Melnyk 2016; Selivanova 2008; Ripinsky 2004). For instance, dual-pricing schemes have led to capital-intensive investments in the Saudi petrochemical sector.[4] In effect, it could consequently be argued that states give unfair advantages to their energy-intensive industries, as the inputs for these industries are available domestically at below global market prices. In essence, this results in a type of inverted subsidy which is facilitated by charging a higher price for the commodity on the export market, thereby allowing the price on the domestic market to be kept artificially low.

---

1 See e.g. WTO (2010, 173–4), and generally on dual pricing Pogoretskyy (2011, 213ff), Selivanova (2008), Behn (2007) and Ripinsky (2004).

2 For instance on leather and soybean oil, see e.g. the WTO dispute in DS126 *Australia – Automotive Leather*, GATT dispute (1981) L/5142 *Spain – Measures Concerning Domestic Sale of Soyabean Oil – Recourse to Article XXIII:2 by the United States (L/5142)* (unadopted), and log and lumber in the softwood lumber saga between the United States and Canada concerning log export bans (note that this was to offset tariff escalation by Japan to force export of logs not lumber to Japan), see DS257 *United States – Final Countervailing Duty Determination with respect to certain Softwood Lumber from Canada*, DS264 *United States – Final Dumping Determination on Softwood Lumber from Canada*, DS277 *United States – Investigation of the International Trade Commission in Softwood Lumber from Canada*. Note that electricity dual pricing also exists but is a somewhat separate issue, see Pogoretskyy (2011, 213–14) and will not be discussed here as this paper focuses on the curbing of fossil fuel subsidies.

3 A relevant question in this context is also e.g. whether China's differential rebate of value-added tax (a lower rebate on upstream products to favour exports of downstream products) could be considered actionable, see WTO, WT/DS501/1, G/L/1141, *China – Tax Measures Concerning Certain Domestically Produced Aircraft*, Request for Consultations by the United States (10 December 2015) and European Parliament (2016, 12–15). Also see Pogoretskyy (2011, 213–14).

4 Especially OPEC members (Saudi Arabia) and Russia are notorious for implementing dual-energy pricing policies, see e.g. Quick (2010, 194–5).

It is contested whether dual-pricing policies are illegal under the WTO per se and the issue remains unresolved in the multilateral trading forum. It is certain, however, that dual-pricing policies at least have an impact on international trade and cause trade-distorting effects, inter alia by affecting the competitive balance between energy-intensive industries and the inputs for products of such industries (Pogoretskyy 2011, 247). Depending on the form dual-pricing policies take, a strong case could be made of their inconsistency with WTO law (Pogoretskyy 2011, 247; WTO 2010, 173). However, this exactly touches upon the core challenge we face concerning these practices: dual pricing can be administered in various forms, most frequently through export taxes, quantitative restrictions or through state monopolies (WTO 2010, 173–4). Because of their fluid features, it is difficult to deal with dual-pricing policies in a straightforward "one size fits all" manner in the multilateral trading system. For instance, although Article XI of the GATT prohibits WTO members from maintaining export restrictions, dual-pricing policies may escape this article if they are administered through export taxes (not regulated by the GATT).[5] The Agreement on Subsidies and Countervailing Measures and the Anti-Dumping Agreement, which will be elaborated upon in this paper, are also relevant for dual-energy pricing. Regarding the ASCM, for instance, it could be argued that the practice of dual pricing is an inverted type of subsidy contrary to ASCM Article 3 or 5.[6]

Dual-pricing policies expose the asymmetry and diverging interests between energy net-exporting and net-importing WTO members. However, aside from having trade-distorting effects, such policies are moreover accompanied by substantial negative environmental externalities. Through dual pricing, states support their national fossil fuel industry at the expense of developing cleaner means of generating energy. As a consequence, dual pricing encourages wasteful consumption of fossil fuels, condones energy-intensive industries profiting from cheap fossil energy inputs, and discourages investment in cleaner forms of energy and increasing and updating innovation and energy efficiency in their sector (Pogoretskyy 2011, 215). In this sense, dual-pricing practices fit into the broader category of environmentally harmful fossil fuel subsidies.

This paper will present options for constraining dual pricing beyond its trade-distorting effects, and will refocus the discussion on dual pricing as part of the bigger challenge of combating climate change. It will approach dual pricing from the perspective of the broader task to reform environmentally harmful fossil fuel subsidies. Therefore, the aim is to move past just the potentially discriminatory nature of dual pricing and lay out options for disciplining these practices in the WTO system in view of their negative environmental impact. After providing some background, the paper explores two main avenues for dealing with dual pricing: First, it will discuss what possibilities exist under current WTO rules. Second, it will proceed to consider what action the WTO can take beyond the current legal toolkit in the wider context of fossil fuel subsidy reform. It will be argued that the WTO is a crucial actor in eliminating dual-pricing policies and can facilitate and significantly contribute to fossil fuel subsidy reform.

5 GATT Article XI (General Elimination of Quantitative Restrictions); Mavroidis, however, argues that while export taxes escape the disciplines under Article XI GATT, they must observe the obligations in GATT Article I (Most Favoured Nation) and could also be potentially captured under a non-violation complaint, see Mavroidis (2015, 87).

6 Article 3 (Prohibited Subsidies) and Article 5 (Actionable Subsidies) of the ASCM, concluded 15 April 1994, 1867 U.N.T.S. 14.

2. DUAL PRICING AS AN ENVIRONMENTALLY HARMFUL FOSSIL FUEL SUBSIDY

Considering their negative environmental impact and the way dual-pricing policies are administered, they can fit into the broader category of harmful fossil fuel subsidies (FFS). FFS is an overarching term for subsidies granted by the government towards the production and consumption of energy from fossil fuels.[7] FFS are involved in the energy industry, as well as in the industries that use energy as an immediate input (one can think of heavy industries such as steel, glass, cement, petrochemicals, etc.) (Steenblik 2010, 186 and 187). Globally, coal, petroleum and natural gas are heavily subsidised (IEA 2017; Clements et al. 2013, Appendix A).

FFS come in a wide range of forms, varying from direct cash transfers to producers and consumers, to more covert practices such as indirect support mechanisms, tax exemptions, rebates, price controls, trade restrictions, limitations on market access, and energy conservation subsidies.[8] Overall, FFS can be divided into two categories: consumer subsidies, which are targeted at reducing the price for domestic consumers; and producer subsidies, aimed at increasing domestic supplies.[9] FFS can be further divided into "pre-tax" and "post-tax" subsidies (Coady et al. 2013). The first type implies that the price paid by a household or firm is below the actual costs for distribution and supply, while the latter occurs when the taxes levied are below their efficient level, including the failure to internalise the negative environmental externalities of the fossil fuel in question. FFS are wasteful and have a negative impact on the environment: research indeed demonstrates that FFS displace cleaner alternatives and keep the fossil fuel industry artificially afloat (IEA, OECD and World Bank 2010, 11). Despite the trade-distorting, wasteful and environmentally harmful effects of FFS, many countries opt to maintain them for reasons of security of supply, industrial policy, protectionism, economic benefit, protection of labour-intensive industries (employment), and access to energy.

Dual-pricing practices, depending on their design, can fit either of the categories of FFS (consumer and producer subsidies, pre- and post-tax). For instance, energy consumers and producers may benefit from artificially low prices for energy (pre-tax consumer and producer subsidies). Alternatively, producers may receive tax breaks on their industrial energy bill (a post-tax producer subsidy). Through dual pricing, this is compensated for by the higher price on the export market for a particular fossil fuel. This way, dual pricing allows for setting the domestic price of energy artificially low. From the perspective of climate change mitigation, this means that states are not incentivised to curb their CO_2 emissions, rather to the contrary: countries that maintain dual-pricing policies are encouraged to keep burning cheap fossil fuels through below global market domestic prices, to the detriment of switching to cleaner forms of energy. In this sense, dual pricing incentivises wasteful consumption of fossil fuels and contributes to increased CO_2 emissions in the atmosphere. Moreover, it

7 The International Energy Agency in 2006 stated that one of the biggest barriers concerning energy subsidies in the countries of the Organisation for Economic Co-operation and Development (OECD) is a lack of up-to-date empirical data and analysis. Studies undertaken on energy subsidies in OECD countries show a remarkably large variance in results, due to the different methodologies used and the variety of definitions of energy subsidy incorporated; see also IISD (2017) and IEA (2017).

8 The EU, for instance, uses so-called "capacity remuneration mechanisms" to maintain back-up energy capacity, usually in the form of fossil fuels, see European Commission (2017b).

9 Steenblik (2010, 186); Asmelash (2015, 267); Coady et al. (2013, 5–7). Consumer subsidies occur when the prices paid by consumers (including firms and households) are below the costs for supply, including the costs for transport and distribution of energy. Producer subsidies imply that prices for energy supply are above this level (when fossil fuels are traded internationally, the supply costs are based on the international price). However, it may at times prove challenging to make a clear distinction between consumer and producer subsidies.

thereby undermines the competitiveness of renewable energy. It is for these reasons that it is of the essence to curb dual-pricing practices, as part of the bigger challenge to reduce and reform FFS.

The International Energy Agency is convinced that phasing out fossil fuel subsidies is one of four essential policies to keep the world on track for the 2°C global warming target at no net economic cost (IEA 2017). Even a partial phase-out by 2020 would reduce greenhouse gas emissions by 360 million tonnes, which equates to 12 percent of the reduction in greenhouse gases needed to hold a temperature rise to the target level (European Parliament 2017, 5). Hence, the case for fossil fuel subsidy reform is a pressing one. Unfortunately, clear standards in reporting and curbing FFS, even among the frontrunners in their reform, the G20, are lacking.[10] Consequently, many states, including those of the G20, continue to subsidise their fossil fuel industries heavily.

A major obstacle in curbing FFS is that the current ways in which they are instituted remain opaque and unclear, not least because an international standardised system to comprehensively monitor them is missing (Coady et al. 2013, 5; Steenblik 2010, 184). The situation is such that even in data-rich countries, substantial disagreement exists as to how much the energy sector is subsidised and the method by which this is calculated, but their estimated amount is vast.[11] In many instances, it may be difficult to expose the existence of a fossil fuel subsidy in the first place. Sometimes, the only available means of measuring its existence is to investigate energy prices within a national jurisdiction (e.g. strikingly low energy prices for consumers, below their international market price).[12]

However, some important first steps towards monitoring and eliminating FFS have been made: Already in 2009, the G20 made a commitment to phasing out FFS, viewing them as wasteful and inefficient (G20 2009). Its actions so far have mainly concentrated on voluntary self-reporting and voluntary peer-reviews on FFS (Asmelash 2017, 7–8). In addition to the G20, the G7 has also vowed to eliminate FFS by the year 2025 in its 2016 Ise-Shima Leaders' Declaration (G7 2016, 28).

While this is a good start, obstacles to further progress are still manifold, such as the lack of a standardised, clear and mutually agreed-upon terminology. Especially on terminology used, substantial disagreement persists among the members of the G20.[13] Additionally, better monitoring and data would greatly contribute to determining the legal definitions relevant for FFS reform. Last but certainly not least, it is also necessary to develop a workable mechanism to enforce the promises the G20 has made regarding the phasing out of FFS. For any effort to be successful, it is vital to enact an enforcement mechanism with hard, potentially intermediate deadlines that countries must adhere to in phasing out their FFS.

Apart from the G20 and the G7, Friends of Fossil Fuel Subsidy Reform (FFFSR) is another initiative that has made an active effort to change the status quo regarding the monitoring of FFS, by providing analytical and administrative support to promote FFS reform. While this support is

10 The challenges surrounding this are clearly explained in Asmelash (2017, 6–9).

11 For instance, in the US, they amounted to around US$600 billion in the year 2011 (Coady et al. 2013, 5).

12 Steenblik (2010, 184). When fossil fuels are traded internationally, the costs for the export market are based on the international price. Regarding the right benchmark, the question is whether it should concern the global price for the energy commodity or the production cost. The OECD has mentioned in its producer subsidy studies that producer subsidies for oil could be specific if they are used by a group of industries. For this, they must be distinguished from consumer subsidies.

13 For instance, Asmelash (2017) points out that Saudi Arabia defines fossil fuel subsidies in such a way that it excludes the vast amount of subsidies it provides for fossil fuel consumers by setting domestic oil prices below international prices.

vital, it remains a voluntary initiative with little decisive power.[14]

The importance of FFS reform also features prominently on the agenda of other global and regional initiatives. The United Nations Sustainable Development Goals, for instance, recognise that reducing the carbon intensity of energy is a key objective in long-term climate goals.[15] The Paris Agreement also carefully mentions that one of its goals is "making financial flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development" (UNFCCC 2015, Article 2(c)). Fossil fuel subsidy reform is moreover discussed in the framework of the Energy Working Group of the regional Asia-Pacific Economic Cooperation.

Realistically speaking, though, it is evident that despite the fact that the inevitability of FFS reform has attracted worldwide attention, FFS will be not be eliminated overnight and gradual reform seems the most feasible solution. Nevertheless, countries committed to reform must make progress on these important matters.

Beyond the FFS reform efforts outside of the WTO, the multilateral trading system can make a significant contribution in curbing FFS. One step in the right direction would be to address environmentally harmful dual-pricing policies in the forum. The WTO offers the capacity both in terms of a broad membership as well as in terms of its substantive mandate. Although the WTO is primarily an organisation tasked with issues pertaining to international trade, the consensus among the WTO membership on the need to combat climate change is undisputed: most WTO members have committed to curbing their CO_2 emissions pursuant to the climate goals in the framework of the SDGs, as in Goal 7. These commitments are in addition to those made by the G20 and FFFSR. After giving a brief overview of dual pricing in the GATT/WTO context, this piece will explore the manner in which the WTO and its membership could play an active role in curbing dual pricing.

14 See generally Asmelash (2017); set up in June 2010, FFFSR is an informal group of non-G20 countries aiming to build political consensus on the importance of fossil fuel subsidy reform. Current members are Costa Rica, Denmark, Ethiopia, Finland, New Zealand, Norway, Sweden and Switzerland.

15 SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all, http://www.un.org/sustainabledevelopment/energy/.

3. UNDERSTANDING DUAL PRICING IN THE CONTEXT OF THE GATT/WTO

Dual pricing is by no means a new topic in the multilateral trading forum and has been a recurring issue in GATT/WTO negotiations for decades. It has been extensively written about by academics and policymakers alike, albeit mainly covering its trade-distorting aspects, and not its adverse impact on the environment.[16] This approach is not a problem per se, as combating trade-distorting practices and negative environmental impacts may very well go hand in hand, although it is likely that the negative environmental impacts of dual pricing outweigh the trade-distorting effects. This paper, however, places the emphasis especially on the need to tackle dual pricing in view of its negative impacts on the environment and combating climate change.

Discussions on dual pricing entered the multilateral trading forum for the first time during the oil crises of the 1970s, in connection with "restrictive" practices in natural resources trade, and the accompanying diverging interests between net exporting and net importing countries. Talks regarding export restrictions and export taxes were included on the agenda of the Tokyo Round.[17] The discourse was fuelled mostly by concerns of the United States and the European Union (see, e.g. GATT 1974). The US was chiefly worried about cheaper inputs for domestic industries of members maintaining dual-pricing policies, which it considered an unfair trade practice. The EU (then European Communities, EC) in addition expressed concerns about the higher price of Russian gas exported to the EU due to dual-pricing policies. However, it should be mentioned that the US behaved inconsistently about dual pricing in 1980, when the EC challenged US price controls on natural gas while maintaining export bans in the Subsidies Committee. The US replied that this was not a subsidy because it was distributed throughout the whole economy: de facto the first recorded manifestation of what was to become ASCM Article 2 on specificity 15 years later.

Despite this stint of inconsistency in the 1980s, the US has generally pushed for including clear provisions on dual pricing either in the GATT or in a separate agreement.[18] However, there was strong resistance by oil producing and exporting countries to binding commitments and no agreement on this subject was reached (Graham 1979a; 1979b; 1980; Leal-Arcas, Filis and Abu Gosh 2014; see also Shih 2009, 439). The topic returned to the agenda during the Uruguay Round, when a Negotiating Group on Natural Resource-Based Products was established in 1987, with a mandate, apart from energy commodities, also including forestry, fisheries, non-ferrous materials and metals.[19] GATT members opposed to dual pricing attempted to readdress the issue and proposed the development of a new code (GATT 1989b, para. 5; UNCTAD 2000, 17; Selivanova 2007, 11). Energy-endowed states, however, yet again resisted establishing any binding rules on trade in natural resources (GATT 1987, Selivanova 2010). Furthermore, there was an attempt to include a specific provision on dual pricing of government-supplied inputs into the

16 See as a selection of authors, Selivanova (2008), Behn (2007) and Ripinsky (2004). As an exception, Pogoretskyy (2011, 214–16), did address the negative environmental impacts of dual pricing, while other authors have focused more on its trade-distorting effects.

17 During the Tokyo Round, export restrictions were taken up in various fora, namely in Group 3(b), see GATT Doc. MTN/3B/9, 1 May 1974; see GATT (1989).

18 See the articles by T. R. Graham, the then United States Trade Representative: Graham (1979a, 20 and 31; 1979b, 161; 1980, 226ff); Leal-Arcas, Filis and Abu Gosh (2014, 123).

19 UNCTAD (2000, 18); See the US submissions in MTN.GNG/NG3/W/2, MTN.GNG/NG3/W/13 and MTN.GNG/NG3/W/23 and the European Community's submission in MTN.GNG/NG3/W/37. Together with the United States and the European Commission, the Negotiating Group argued that these practices could distort international trade and grant a competitive advantage to exporters, therefore constituting prohibited subsidies.

draft of the ASCM during the Uruguay Round negotiations, unfortunately without success. The issue of dual pricing re-emerged again in Doha Round negotiations on rules as the US and the EU, alas ineffectively, proposed expanding the category of prohibited subsidies under Article 3 of the ASCM (Yanovich 2011, 22; Espa and Rolland 2015, 6). The EU was of the opinion that Article 3.1 should also cover "the provision, by the virtue of government action, of goods to domestic production on terms and conditions more favourable than those generally available for such goods when destined for export" (Espa and Rolland 2015, 6–7). Unfortunately, the proposal did not gain traction among WTO members.[20]

In broad terms, the debate on dual pricing in the multilateral trading forum can accordingly be summarised as follows: WTO members opposed to dual pricing have historically argued that states administering dual-pricing policies are indirectly subsidising their energy-intensive industries by providing them with cheaper inputs. Members maintaining dual-pricing policies, on the other hand, believe they are merely exploiting their comparative advantage, using dual pricing as a development tool to diversify their economies, leaving the issue unsettled in the WTO.

However, despite these unsuccessful attempts to establish some binding rules on the issue within the multilateral trading forum, some progress has been made regarding dual pricing in past years, especially in the context of WTO negotiations over the accession of new members. Dual pricing was, for instance, raised in the context of the accession of Saudi Arabia (2005).[21] The Russian Federation, in its accession in 2011, even went a step further and tied some of its export duties on energy products, committing to phasing them out over time, while also making commitments on dual pricing.[22] For non-petroleum gases, for instance, the export duty will decrease to zero over the implementation period of the Accession Protocol (four years).[23] Regarding export duties on crude oil, as well as some other oil products, Russia moreover committed to a formula that calculates the duties on the basis of the world price of oil.[24] These commitments are, however, tailored narrowly to natural gas. The question whether, and to what extent, both Saudi Arabia and Russia have lived up to their accession commitments on energy also remains unanswered.

While these developments point to the fact that dual pricing remains a widely utilised practice among members, it also signals a positive development, namely that despite the contested legality of dual pricing, acceding members are willing to make binding commitments on the issue. It demonstrates that dual pricing can be subject to negotiation. Negotiating binding commitments on dual pricing could thus offer a partial solution to the problem, at least with respect to nations that are in the process of acceding to the WTO (of which a fair share, such

20 Additionally, the fact that the US and EU did not achieve what they wanted regarding dual pricing can also be attributed to their insistence on protectionist Anti-Dumping provisions and a refusal to deal with Brazil and India on Item (k) of Annex I to the ASCM Agreement (export credits).

21 Accession Protocol: WT/L/627 (11 December 2005); WTO (2005), stating in para. 28: "In response to a question from a Member of the Working Party, the representative of Saudi Arabia stated that all petroleum based and natural gas-based products in Saudi Arabia were made available to all users regardless of whether the users were Saudi or foreign owned. He noted that currently domestic sales of heavy naphtha were not subject to any discount and were priced at the prevailing international price. Prices of exports of these products, he confirmed, were based entirely on international market conditions."

22 See Russia's Schedule of Concessions and Commitments on Goods, Schedule CLXV, Part V, pp. 853 and 870; HS Convention: The Harmonised System Convention (Harmonised Commodity Description and Coding System), 14 June 1983, 1503 U.N.T.S. 167, Chapter 27 Mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes.

23 Russia's Schedule; HS Convention; see also on Russia's final commitments generally, Pogoretskyy and Melnyk (2016).

24 Accession Protocol: WT/L/839 and WT/MIN(11)/27 (22 August 2012); WTO (2011, Annex 1).

as Algeria, Azerbaijan, Iran, Iraq, Libya, and Sudan, are major fossil fuel energy producing and exporting countries). If, in addition to this, there is an increased awareness-raising of the negative environmental impacts of dual pricing, acceding countries may be incentivised further to undertake binding commitments on the issue. A main motivator would be that curbing dual pricing could significantly contribute to the reductions of CO_2 emissions that countries have committed to under the Paris Agreement. Of course, ensuring binding commitments on dual pricing would merely offer a partial solution to the problem and does not solve dual-pricing practices that are maintained by existing WTO members. But it is of the essence to realise that we are looking at dual pricing through a different lens than in previous decades: in GATT/WTO history the objective of tackling dual pricing was to ensure that exports would become cheaper. Today, in view of curbing CO2 emissions, the goal would be the opposite, namely to make domestic consumption of fossil fuels more expensive, including outputs from downstream industry in the countries that apply dual-pricing policies. The next section will explore how the WTO can address dual pricing through current rules.

4. OPTIONS FOR CONSTRAINING DUAL PRICING IN THE WTO UNDER EXISTING RULES

The previous sections made it clear that there are two dimensions to dual pricing: the purely trade-distorting aspect of the practice, and the negative environmental impact of dual pricing in the context of curbing harmful FFS. As mentioned in the introduction, there are convincing arguments that dual-pricing practices violate current WTO rules, especially under the GATT, and the ASCM and ADA.[25] Although the WTO is a forum primarily set up to deal with matters that affect cross-border trade, it can, and should, contribute positively to eliminating dual pricing and thereby its negative impacts on the environment. This section explores options for tackling dual pricing under existing rules in view of their environmental impact and FFS reform. WTO members can resort to individual remedies in offsetting the negative trade-distorting and environmental effects of dual pricing, as well as taking plurilateral and multilateral action, which will be addressed later.

A crucial missing link regarding action against dual pricing and/or FFS in the multilateral trading forum is that none of these issues have (yet) been dealt with and clarified through WTO dispute settlement.[26] An explanation for this may be the fact that energy has not featured prominently in the forum until relatively recently (Marhold 2013; Selivanova 2007). Another reason may be the reality that curbing FFS is a collective action problem: FFS are so omnipresent that WTO members would not want to risk raising the issue in the dispute settlement system for fear of causing perceived self-inflicted harm. However, this is a faulty assumption, as leaving FFS reform unaddressed is significantly more harmful. More awareness-raising among all WTO members on the negative environmental impacts of FFS is therefore of the utmost importance.

The most likely scenario in which disputes concerning dual pricing or FFS could arise in the WTO is if these practices negatively affect trade and the national industry of another WTO member. For instance, a case could be brought if a domestic industry of a WTO member suffers significantly from dual-pricing policies by another WTO member that result in cheap energy inputs for competing industries. While such action would not be strictly motivated by environmental concerns, it could nevertheless have a knock-on effect on curbing the practice in favour of the environment. The following discussion on the GATT will exclusively deal with Articles XI General Elimination of Quantitative Restrictions) and Article XVII (State Trading Enterprises), as these are of particular relevance to dual pricing. Note that when considering the arguments, Article XX GATT defences should always be kept in mind, as members utilising dual-pricing policies may argue that the practice serves certain legitimate and social objectives, especially when it concerns volatility in global markets.

4.1 General Agreement on Tariffs and Trade: Articles XI and XVII

4.1.1 Article XI (General Elimination of Quantitative Restrictions)

A dual-pricing measure, if administered in a way that restricts quantitative exports of the energy resource (apart from duties, taxes or other charges), may fall foul of Article XI.1 of the GATT, which prohibits quantitative import and export restrictions on goods. Members maintaining restrictive measures on fossil fuels can do so in the hope of causing a

25 It should be mentioned that avenues for constraining dual-pricing polices under the ASCM and ADA are solely applicable to trade in goods, not in services.

26 For a study exploring why this may be the case, see Asmelash (2015), and generally De Bièvre, Espa and Poletti (2017).

higher (artificially inflated) demand for such vital goods on the export market, followed by an increase of the export price vis-à-vis the applied domestic price (Pogoretskyy 2011, 219; Marhold 2016, 479–82). On tackling dual pricing through Article XI.1, it should be noted that the ultimate goal would not be to ensure export prices of the fossil fuel in question would drop to the same (artificially) low price level as maintained in the exporting country. For this would not solve the negative environmental impact of dual pricing: fossil fuels would continue to be wastefully burned. The idea would rather be that domestic and export prices would even out by invoking this article, ensuring that the exporting country would domestically start charging the higher, globally prevailing market price for the fossil fuel in question. This will enable green energy to become more competitive and incentivise countries that apply dual-pricing policies to switch to cleaner means.

Paragraph 1 of GATT Article XI.1 reads as follows:

> No prohibitions or restrictions other than duties, taxes or other charges, whether made effective through quotas, import or export licences or other measures, shall be instituted or maintained by any contracting party on the importation of any product of the territory of any other contracting party or on the exportation or sale for export of any product destined for the territory of any other contracting party.

A caveat is in place here, however: it is essential to determine at what stage in the process Article XI.1 becomes applicable to the natural resource in question (think, e.g., of the practice of the OPEC production quota) (Marhold 2016; Cossy 2012). While case law suggests that the wording of Article XI.1 should be interpreted broadly (see e.g. *Japan – Semiconductors*, *Argentina – Import Measures*, and *India – Quantitative Restrictions*), it is unclear to what extent it would cover production quotas and ceilings on fossil fuels in their natural state (i.e. before extraction, when still in the ground).[27] Many would argue that this falls within the sovereignty over natural resources of the member in question pertaining to United Nations General Assembly Resolution 1803 on the Permanent Sovereignty over Natural Resources, and would not be subject to WTO disciplines.[28] With regard to natural resources, there is a fine line between quantitative export restrictions and production quotas. Evidence of this is China's binding commitments on export duties on critical raw materials in its Accession Protocol. China agreed to tie its export duties on several raw materials and rare earths, and eliminate other export restrictions (such as licensing), a central issue in the *China – Raw Materials* and *China – Rare Earths* cases.[29] After China was found in violation of its commitments by the

27 *Japan – Trade in Semiconductors* (L/6309 – 35S/116) (Report of the Panel Adopted on 4 May 1988) paras 104–9; Panel Report, *Argentina – Measures Affecting the Export of Bovine Hides and Import of Finished Leather*, WT/DS155/R and Corr.1, adopted 16 February 2001, DSR 2001:V, p. 1779; Panel Report, *India – Quantitative Restrictions on Imports of Agricultural, Textile and Industrial Products*, WT/DS90/R, adopted 22 September 1999, upheld by Appellate Body Report WT/DS90/AB/R, DSR 1999:V, p. 1799, para. 5.119; and Marhold (2016, 484–5).

28 UN General Assembly Res. 1803 (XVII) (18 December 1962) "Permanent Sovereignty over Natural Resources'; see on the international law principle of Sovereignty over Natural Resources and the history of the UNGA Resolution generally, Schrijver (2008).

29 Appellate Body Reports, *China – Measures Related to the Exportation of Various Raw Materials*, WT/DS394/AB/R / WT/DS395/AB/R / WT/DS398/AB/R, adopted 22 February 2012, DSR 2012:VII, p. 3295; Panel Reports, *China – Measures Related to the Exportation of Various Raw Materials*, WT/DS394/R, Add.1 and Corr.1 / WT/DS395/R, Add.1 and Corr.1 / WT/DS398/R, Add.1 and Corr.1, adopted 22 February 2012, as modified by Appellate Body Reports WT/DS394/AB/R / WT/DS395/AB/R / WT/DS398/AB/R, DSR 2012:VII, p. 3501; Appellate Body Reports, *China – Measures Related to the Exportation of Rare Earths, Tungsten, and Molybdenum*, WT/DS431/AB/R / WT/DS432/AB/R / WT/DS433/AB/R, adopted 29 August 2014; Panel Reports, *China – Measures Related to the Exportation of Rare Earths, Tungsten, and Molybdenum*, WT/DS431/R and Add.1 / WT/DS432/R and Add.1 / WT/DS433/R and Add.1, adopted 29 August 2014, upheld by Appellate Body Reports WT/DS431/AB/R / WT/DS432/AB/R / WT/DS433/AB/R.

Panel and the Appellate Body, China actually resorted to transforming its export duties into a production quota on these raw materials, much in line with OPEC's restrictive practices on petroleum.[30]

The issue becomes more difficult if dual pricing is administered through an export tax. Export taxes, in contrast to export restrictions, are admissible under the GATT. Historically, access to markets and reducing protectionism was a bigger challenge under the GATT than export restrictions: the GATT was negotiated to protect importers from protectionist measures.[31] Dual pricing by means of an export tax on an energy commodity favours the economy of a member applying the tax in three possible ways. First, it can contribute to the general budget of the state. Second, it can benefit the energy industry of that state directly. Third, it causes a discrepancy between the total price for the good on the export market and the domestic price for the commodity, leading to the aforementioned cheaper inputs for competing energy-intensive industries. While export taxes may not be protectionist in the narrow sense towards the industry of the exporting country, they do nevertheless accord an advantage to the (industry of the) member applying the tax, thereby arguably being protectionist in the wider sense. In this context, it is worth noting that the fact that export taxes are not explicitly regulated in the GATT does not imply that a member cannot challenge them in dispute settlement. Since case law has taken on a very broad definition of restrictive practices as to what constitutes a de facto quantitative restriction, a panel would have to decide on the issue of whether the effect of the export tax in question would amount to a de facto export restriction in violation of GATT Article XI.1.

In this light, the implications of a partial WTO-wide reform of disciplines on export taxes should be explored. Generally speaking, taxes are levied domestically by governments on income, property and sales. A tariff, on the other hand, is a tax imposed on imported (or exported) goods and services as a tool available to shape international trade policy. It could be argued, though, that export taxes, although not regulated in the GATT, in effect function as export tariffs, as they restrict cross-border trade. An effective option could be to ensure that WTO members transform any export tax they maintain into an (export) tariff. This would significantly increase the transparency of the use of export taxes and dual pricing, as they would be subject to Article II.1 of the GATT (Schedules of Concessions). This feature would also facilitate the negotiation and reduction of dual pricing maintained through export taxes.

Alternatively, members may try to offset export taxes on fossil fuels by imposing a carbon tax on the energy commodities in question. As fossil fuels are slowly decreasing in their competitiveness owing to the rise of clean and renewable energy, export taxes may become a less attractive option, especially if the importing country is no longer in desperate need of the fossil fuel as a result of a more varied energy mix, offering a broader choice in cleaner energy.

4.1.2 Article XVII (State Trading Enterprises)

Article XVII.1 of the GATT on State Trading Enterprises prescribes that if a WTO member maintains a state trading enterprise (STE), "such enterprise shall, in its purchases or sales involving either imports or exports, act in a manner consistent with the general principles of non-discriminatory treatment prescribed in this Agreement for governmental measures affecting imports or exports by private traders." What exactly constitutes an STE remains vague and open to interpretation, which may prove to be problematic. However,

30 Rolland (2012); and generally, Espa (2015).

31 Most articles in the GATT focus on eliminating import barriers and there are very few discipline barriers on exports. One example that illustrates this is the asymmetry between the treatment of import tariffs (GATT Article II) versus export tariffs (no equivalent GATT article). Although export tariffs are increasingly being negotiated, they remain much less frequent, see Bagwell, Staiger and Sykes (2015, 129).

it may be assumed that traditional government-owned or government-controlled fossil fuel enterprises (such as Saudi Aramco) would fall into this category.[32] Moreover, Article XVII also covers enterprises that have been granted "special rights or privileges" by the government (Pogoretskyy 2011, 220–2). Selivanova is of the opinion that special rights and privileges are assumed if "it appears that rights or privileges can be considered exclusive or special if they enable the enterprise to influence trade flows" (Selivanova 2008, 100; Pogoretskyy 2011, 220-2). This is an important addition: major energy exporting states often operate through state-owned energy enterprises and dual-pricing policies have significantly impacted the terms of the global trade in fossil fuels. This implies that if a state-owned energy company of a WTO member, qualifying as an STE, maintains dual-pricing policies, the STE would be likely to be behaving in a discriminatory manner contrary to Article XVII.1 (and not solely in accordance with commercial considerations, Article XVII.2 GATT).[33] WTO members wishing to act against members maintaining dual pricing should explore this avenue as well.

4.2 The Agreement on Subsidies and Countervailing Measures

4.2.1 Dual pricing as a prohibited or actionable subsidy

The Agreement on Subsidies and Countervailing Measures is the agreement most relied upon that could effectively deal with dual-pricing practices. Numerous scholars and policymakers, such as Selivanova, Pogoretskyy, Rolland and Espa have explored avenues for taming dual pricing by means of the ASCM. In addition to these, this section raises additional options available under the agreement.

The rationale of the ASCM is to protect WTO members' national industries from the negative cross-border effects of subsidies maintained by another WTO member. Article 1.1 ASCM determines that a subsidy exists if there is (a)(1) "a financial contribution by a government or any public body within the territory of a Member," or (a)(2) "any form of income or price support in the sense of Article XVI of GATT 1994" by a government or public body in a WTO member, through which (b) a benefit is conferred upon its recipient. Article 2 ASCM furthermore determines that the subsidy must moreover be deemed "specific" to be subject to the provisions of the ASCM. The ASCM distinguishes between prohibited subsidies (Article 3 ASCM) and actionable subsidies (Article 5 ASCM). Pursuant to Article 4 of the ASCM (Remedies), WTO members negatively affected by a subsidy of another member essentially have two options. They can refer the case to dispute settlement in the hope that a panel will deem the subsidy either prohibited or actionable and order its withdrawal and/or removal of its adverse effects.[34] If the subsidising member does not follow the recommendations rendered in WTO dispute settlement, the affected member may take countervailing measures according to Part V of the ASCM. The affected member may initiate countervailing investigations, possibly leading to the application of countervailing duties (CVDs) in accordance with the agreement (Article 11 ASCM).

Once it has been established that a certain measure qualifies as a subsidy in the sense of the ASCM, there are thus several options for redress for WTO members. The crucial and controversial difficulty here is, however, to ensure that we can fit dual pricing into the definition of a subsidy within the meaning of the ASCM.

---

32 Saudi Aramco, also known as the Saudi Arabian Oil Company, is the national petroleum and natural gas company of Saudi Arabia.

33 Although it should be noted that it may make commercial sense to charge a higher price abroad than domestically, depending on the market. If purchasing power abroad is higher than in a domestic market, then charging a higher price abroad than domestically is understandable.

34 Note, however, that the case would need to meet the "pass-through" test as elaborated on by the Appellate Body in *Softwood Lumber IV*, see Appellate Body Report, *United States – Final Countervailing Duty Determination with Respect to Certain Softwood Lumber from Canada*, WT/DS257/AB/R (2005) para. 143; also see Pogoretskyy (2011, 226).

Depending on the form a dual-pricing measure takes, there is a plausible argument to be made that it can fit the definition of a subsidy within the meaning of Article 1 of the ASCM. For instance, the government provision of cheaper input prices of energy for energy-intensive industries, made possible through dual-pricing practices, could be considered a "government provision of goods and services," albeit in an unconventional "inverted" manner (WTO 2010, 173–4; Pogoretskyy 2011, 236). The line of reasoning is that the government provision of a natural resource at less than fair market value (the dual-pricing practice) confers a benefit within the meaning of the ASCM to the domestic producers of the member, resulting in an actionable or prohibited subsidy. Intermediate consumers (firms) can be considered to be subsidised this way, as they have lower input prices for their energy-intensive industries (WTO 2010, 173–4; Pogoretskyy 2011, 236). While this reasoning may not be able to catch all dual-pricing schemes, it may be effective for some. For this reason, a governmentally instituted dual-pricing programme could be seen as a form of financial contribution under Article 1.1 of the ASCM.[35]

The challenge here is that if the revenue of dual-pricing schemes confers a general benefit/ aggregate welfare to the member, it may not be deemed specific in the sense of Article 2 ASCM and therefore not fall into the legal definition of Article 1. Consumer, as opposed to producer subsidies are especially difficult to qualify as specific, as they often confer a general advantage to a large category of consumers in a member (Mavroidis 2012, 524; Quick 2010, 195). However, it could be argued that dual pricing confers a specific benefit to the energy industry (i.e. an upstream subsidy to the energy industry) and industries that have an intensive input of energy. In this sense, it would be sensible to focus on dual pricing as a subsidy to producers, attempting to prove that dual pricing confers a specific benefit on them within the meaning of Article 2 ASCM.

Article 5(c) ASCM prescribes that a subsidy has an adverse effect on a WTO member when the subsidised imports cause "serious prejudice" to the interests of another member, making them actionable (Van den Bossche and Zdouc 2013, 785). Article 6 ASCM elaborated on this notion of "serious prejudice," and determines under what conditions it may arise. The panel in *Korea – Commercial Vessels* elaborated, moreover, on the concept of "serious prejudice" as being concerned with negative effects on a member's trade interests regarding a particular product. This can concern a loss of import or export volume or market share, adverse price effects, or both, in the relevant market (Van den Bossche and Zdouc 2013, 786).

If a complaining member can prove that dual pricing as a subsidy affects it through one of the means mentioned in Article 6 ASCM, "serious prejudice" is deemed to exist and will make the subsidy actionable. Exemplary here is the recent case the United States has launched against China (*China – Subsidies to Producers of Primary Aluminium*), claiming the actions of the latter in the aluminium sector violate WTO subsidies rules and cause "serious prejudice" to other WTO members.[36] The dispute could be considered as dealing with dual pricing on aluminium: the US claims that China is undercutting global prices for aluminium and artificially expanding China's market share through providing artificially cheap state-directed loans, coal, electricity and raw materials to the industry. The case is currently in consultations, but may possibly set a precedent with respect to dual pricing.

To summarise, if a certain dual pricing measure met the threshold of the definition of a subsidy under Article 1 of the ASCM, an affected WTO member could argue that the practice is contrary to Article 3 or Article 5 of the ASCM. The affected member could subsequently resort to dispute settlement or CVD investigations. Countervailing duties would be a particularly effective tool in offsetting the negative effects

35 Article 1.1(a)(1)(iii) ASCM; WTO (2010, 173ff).

36 WTO, DS519, *China – Subsidies to Producers of Primary Aluminium* (in consultations).

of dual pricing: it would allow states to take unilateral action against dual pricing and make it less appealing for countries to maintain dual-pricing policies. However, it may also be risky to use CVDs for environmental matters as they would be likely to be applied in a discriminatory way, not to mention that CVDs favour large markets, as their uncompetitive local producers have no need to export. But, as already mentioned, this has not been subject to dispute settlement so far and only a case could give certainty about the matter.

Last but not least, it is important to mention Article 25 ASCM (Notifications) with respect to dual pricing and FFS more generally: Pursuant to the Article 25.2, members "shall notify any subsidy as defined in paragraph 1 of Article 1, which is specific within the meaning of Article 2, granted or maintained within their territories." Members should indeed enhance their subsidy notification under this article, especially with regard to FFS, including dual pricing (Asmelash 2017, 13–14). However, as has been discussed, at the heart of FFS reform lies a collective action problem, making self-notification of FFS more difficult to enforce under current subsidy rules. Article 25.10 ASCM on counter-notification may offer a solution in this respect (Asmelash 2017, 13-14). The article states:

> Any Member which considers that any measure of another Member having the effects of a subsidy has not been notified in accordance with the provisions of paragraph 1 of Article XVI of GATT 1994 and this Article may bring the matter to the attention of such other Member. If the alleged subsidy is not thereafter notified promptly, such Member may itself bring the alleged subsidy in question to the notice of the Committee.

Article 25.10 ASCM consequently allows WTO members to bring FFS, including dual pricing, to the attention of the country imposing them, as well as the Committee on Subsidies and Countervailing Measures.

4.3 The Anti-Dumping Agreement

4.3.1 Countering dual pricing by adjusting the dumping margin

Apart from the ASCM, the Anti-Dumping Agreement can also be a useful, and perhaps even more realistic, tool in countering the negative impact of dual pricing, considering the existing case law.[37] In the sense of Article 2.1 ADA, a product is dumped if it is introduced into the commerce of another country at less than its normal value. Dumping exists where the "normal value" of the product exceeds the "export price." Closely related to the subsidies debate, it could be argued that dual pricing is a case of "reversed input dumping," that is, that goods which benefited from cheap energy inputs by means of below market energy prices can and are dumped on the market of the importing country (e.g. steel products) as a result of those cheap inputs domestically (Pogoretskyy 2011, 239). The logic here is that the actual price for the product, in absence of anti-competitive practices, would have been higher on the export market.

A WTO member may apply anti-dumping duties (ADDs) against members involved in dual pricing (Article 9 ADA).[38] For that, the member in question will have to prove that the dumping is causing it injury, and that there is a causal link between the dumping and that injury (Article 3.5 ADA). First, one must determine the "normal value" of the dumped product, and subsequently the relevant "export price," to establish whether dumping exists. To prove that imports are dumped because they benefited from artificially maintained low domestic prices for energy, a member may use one of the alternative methodologies for calculating the normal value of the product.

---

37 Agreement on Anti-Dumping: Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994, April 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1868 U.N.T.S. 201.

38 Note, however, that according to Article VI:5 GATT, a WTO member cannot at the same time institute CVDs and ADDs to the same instance.

Such a methodology would entail constructing the normal value of the product in question based on the cost of production in the domestic market of the exporting member, except for the cheap energy input. Prices for the energy input would need to be adjusted to reflect their higher nature, as charged elsewhere. This would allow the anti-dumping authority to determine that the actual normal value of the imported product is higher than the price charged on the export market, and on this basis, it could establish dumping. However, it remains uncertain to what extent the ADA permits determining the normal value in this manner.[39] With respect to dual-pricing practices, the calculation methodology can be based on the substitution of exporters' actual energy costs by comparing costs in surrogate countries, which allows members that have been affected adversely by the dumping to inflate the dumping margins (Article 2.2 ADA). In essence, this allows members to construct the "normal value" differently, taking into account the cheap input of, for example, natural gas from Russia. At present, there are two such cases pending in the WTO, *European Union – Cost Adjustment Methodologies and Certain Anti-Dumping Measures on Imports from Russia* and *EU – Anti-Dumping Measures on Certain Cold-Rolled Flat Steel Products from Russia*.[40] In essence, the EU acted against dual-pricing policies from Russia and instituted ADDs against imports of ammonium nitrate and cold-rolled flat steel products, using an alternative method for establishing the normal value of the product.[41] In both instances, Russia is objecting to the way the EU has calculated the anti-dumping margin.

While this solution does not primarily target the environmentally adverse impacts of dual pricing, the application of ADDs provides states with an effective tool that, if successful, will have a deterrent effect on dual-pricing practices. It should be mentioned, however, that ADDs are a double-edged sword in this respect: It is estimated that two-thirds of EU ADDs are on renewable energy (technology), such as solar panels from China.[42] This in and of itself is not a problem if dumping is indeed taking place. If correctly applied, ADDs on renewable energy technology do offer domestic producers of clean energy protection from dumped imports.

---

39 Costs can in any case not be calculated by disregarding the actual prices paid, see in particular the case law in DS427, *China – Anti-Dumping and Countervailing Duty Measures on Broiler Products from the United States*, Report of the Panel (2013), and DS473, *EU – Anti-Dumping Measures on Biodiesel from Argentina*, Report of the Appellate Body (2016).

40 WTO, DS494, *EU – Cost Adjustment Methodologies and Certain Anti-Dumping Measures on Imports from Russia* (Second Complaint 7 May 2015, Panel established but not yet composed), and WTO, DS521, *EU – Anti-Dumping Measures on Certain Cold-Rolled Flat Steel Products from Russia* (in consultations).

41 Based on the EU's Basic Regulation, Article 2(3) and Commission Implementing Regulations, respectively.

42 See e.g. Council Implementing Regulation (EU) No. 1238/2013 of 2 December 2013 imposing a definitive anti-dumping duty and collecting definitively the provisional duty imposed on imports of crystalline silicon photovoltaic modules and key components (i.e. cells) originating in or consigned from the People's Republic of China (OJ 2013 L 325, p. 1).

5. BEYOND EXISTING RULES: HOW CAN THE WTO CURB DUAL PRICING AND PROMOTE FOSSIL FUEL SUBSIDY REFORM?

The options available under the current WTO legal toolkit, as discussed, would provide a WTO member, or group of members, solid grounds for challenging dual-pricing policies of another member. At a minimum, bringing such a case to the multilateral trading forum would certainly attract attention to the necessity of phasing out dual-pricing policies. It would also send a strong signal that such policies are not immune to being challenged in WTO dispute settlement. Moreover, it is likely that such a move would function as a trigger to rapidly include talks on broader FFS reform on the WTO agenda.

In addition to the possibilities under existing rules examined in the previous section, the following section will highlight avenues for addressing the issues of dual pricing and FFS reform that go beyond existing WTO rules. First, some suggestions are given on how subsidy rules could be reformed to curb dual pricing. By means of conclusion, the section will explore what role the WTO could play in contributing to broader FFS reform by looking at examples from other legal regimes: it is imperative that the organisation and its membership recognise the importance of phasing out dual pricing and of FFS reform and the crucial role the WTO can and should play therein. The options put forward in this section will additionally ensure greater transparency regarding the way FFS and dual-pricing policies are instituted, which is ultimately a precondition for their successful reform.

Many have argued for amending the existing rules on subsidies in the WTO, as these rules are considered outdated in light of developments in recent years on the need to scale up clean energy production and combat climate change (Rubini 2015; Howse 2010; Horlick and Clarke 2016; Espa and Rolland 2015). In fact, they led to absurd outcomes in the *Canada – Renewable Energy* case, where the Appellate Body had to resort to legal acrobatics to avoid deciding that a feed-in tariff was a subsidy within the meaning of the ASCM.[43] Certainly, there are several ways through which reform of WTO subsidies disciplines could contribute to constraining dual pricing.

5.1 Amending the ASCM: Inspiration from TTIP Negotiations and the EU-Ukraine DCFTA

It has been explained how dual pricing can be considered an inverted input subsidy that affects cross-border trade. Amending the ASCM to add dual pricing as a prohibited subsidy to Article 3.1 ASCM would therefore be a straightforward manner to discipline the practice under WTO law. As previously mentioned, the EU and the US have indeed proposed exactly this in the past.[44] However, it was also noted that this, and comparable proposals by WTO members, have been unsuccessful in the multilateral trading context up to now. Nevertheless, efforts to include dual pricing in the list of prohibited subsidies in Article 3.1 ASCM should be revived at least in the medium and longer term, for two reasons: first, because momentum has been created in view of climate change mitigation commitments and the 2030 SDGs; second, because recent successful examples of including dual pricing in other major treaty negotiations and, more importantly, in provisions of treaty texts exist.

---

43 WTO, *Canada - Renewable Energy / Canada - Feed-in Tariff Program* Appellate Body Reports, *Canada - Certain Measures Affecting the Renewable Energy Generation Sector / Canada - Measures Relating to the Feed-in Tariff Program*, WT/DS412/AB/R / WT/DS426/AB/R, adopted 24 May 2013, DSR 2013:I, p. 7 (para. 5.246).

44 Espa and Rolland (2015, 6) and Yanovich (2011, 22) note that both the US and the EU proposed expanding the category of prohibited subsidies under Article 3, with the EU proposal stating that Article 3.1 should also cover "the provision, by the virtue of government action, of goods to domestic production on terms and conditions more favourable than those generally available for such goods when destined for export."

These examples give us an indication of what form such an addition to the ASCM could take. Here, we especially consider proposed draft treaty texts in the EU–US Transatlantic Trade and Investment Partnership (TTIP) negotiations, and the inclusion of a provision on dual pricing in the EU–Ukraine Deep and Comprehensive Free Trade Agreement (DCFTA) in the context of the EU–Ukraine Association Agreement.[45]

The negotiation of a prohibition on dual pricing has been included at several stages of the TTIP. Already in 2013, the EU proposed to include dual pricing in its talks with the US, as it is convinced that it can improve competitiveness and transparency in raw materials and energy markets (European Commission 2013a, 3). In its initial position paper, the EU stated:

> Government intervention in the price setting of energy goods on both the domestic market for industrial users and of energy goods destined for export purposes should be limited. A prohibition on dual pricing should further limit the possibility for resource rich countries to distort the market and subsidize sales to industrial users thus penalising foreign buyers and exports. (European Commission 2013a, 3)

Subsequently, the EU in its first TTIP treaty text proposals of 2013 included draft articles (Articles C–F) on export restrictions, domestic price regulation, dual pricing and trading and export monopolies (European Commission 2013b). The draft article on dual pricing (Article E) states that:

> neither Party or regulatory authority thereof, shall adopt or maintain measures resulting in a higher price for exports of raw materials and energy goods to the other Party than the price charged for such goods and materials when intended for domestic industrial consumption.

and also:

> The exporting Party shall upon request of the other Party provide the necessary information to substantiate that a different price for the same raw materials and energy goods sold on the domestic market and for export does not result from a measure prohibited by paragraph 1.

This exact wording has disappeared from the draft treaty text proposed by the EU in 2016, and was replaced by an article on export pricing, which amounts to the same as dual pricing:

> A Party shall not adopt or maintain a higher price for exports of goods to the other Party than the price charged for such goods when destined for the domestic market, by means of any measure such as licenses or minimum price requirements.[46]

While TTIP negotiations may currently have been put on the back burner, the approach and text proposed by the EU could be partially used for reforms of the ASCM to include dual pricing. The United States has been generally a proponent for many of these issues that the EU identified for TTIP negotiations, including the opposition to dual pricing and export restrictions (Benes 2015, 17). In fact, these draft TTIP provisions were inspired by successful commitments on dual pricing by acceding WTO members and a provision in the North American Free Trade Agreement (European Commission 2013a). Reinserting such a provision into the ASCM would therefore provide the necessary consistency in dual pricing regulation in international trade agreements.

More importantly, another example that may inspire ASCM reform is the successful inclusion of a prohibition on dual pricing in the EU–Ukraine DCFTA. This recently concluded treaty

45 European Commission (2017a); USTR (2017). The EU–Ukraine DCFTA is part of the EU–Ukraine Association Agreement between the European Union and its Member States, of the one part, and Ukraine, of the other part, L161/3 (29 May 2014), see Chapter 11.

46 Article XXX (Export pricing), European Commission (2016).

contains a chapter on Trade-Related Energy (Chapter 11). Articles 269–71 in Chapter 11 form its centre of gravity and explicitly prohibit any forms of dual pricing and related discriminatory measures when trading energy. Article 269(1) prescribes that the price of gas and electricity supply shall be determined solely by supply and demand, although parties are allowed to regulate for the purposes of "general economic interest" (Article 269(2)). If parties do decide to do so, they have to ensure that the regulations and calculations thereof are published prior to their entry into force (Article 269(4)).

Dual pricing is prohibited altogether by means of Article 270 (Prohibition of Dual Pricing). This "GATT-plus" style commitment is a very clear stance on the practice, and in line with the EU position on dual-pricing policies of the past decades. Although the prohibition does not link dual pricing with subsidisation directly, it does so implicitly by including all measures that may result in dual pricing:

> neither Party or a regulatory authority thereof, shall adopt or maintain a measure resulting in a higher price for exports of energy goods to the other Party than the price charged for such goods when intended for domestic consumption. (Article 270(1))

The same applies with respect to customs duties and quantitative restrictions, which are prohibited, unless they are justified on grounds of public policy or public security; protection of human, animal or plant life or health, or the protection of industrial and commercial property (Article 271(2)). Such restrictions or measures may not constitute a means of arbitrary discrimination or a disguised restriction on trade between the parties. The EU–Ukraine DCFTA thus offers a very clear example in practice on what legal form a prohibition on dual pricing can take. If WTO members wish to include a rule on dual pricing in the ASCM or in a potential plurilateral agreement on (renewable) energy, the provisions in the EU–Ukraine DCFTA may provide some guidance, in addition to the proposed TTIP text. Leastwise, it should be ensured that acceding WTO members that maintain dual-pricing policies should take up provisions of this kind in their accession protocols. Additionally, when considering the broader reforms of subsidy disciplines, the way fishery and agricultural subsidies are being reformed could provide inspiration with regard to FFS reform.[47]

5.2 Offsetting the Impacts of Dual Pricing by Creating Policy Space to Support Green Energy

Another way to address the negative effects of FFS in the WTO, instead of solely focusing on disciplining them, would be to refocus on the opposite: ensuring the legitimisation of support for green energy under the ASCM. The effect of this can balance out the asymmetry that currently exists in the WTO regarding green subsidies. While there is no case in dispute settlement on FFS, green and renewable energy programmes are often a target of dispute settlement proceedings in the WTO (Asmelash 2015). Ensuring legitimisation of green subsidies would not necessarily entail the reinstatement of lapsed Article 8 of the ASCM, as this article proved ineffective when in force (Wu 2015, 2–3). Rather, a more sophisticated redrafting and rethinking of the rules would be necessary to create sufficient policy space for this purpose. The WTO could learn in this respect from the current EU rules on state aid (the European quasi-equivalent of subsidy rules).[48] Although the extent to which EU rules are compliant with WTO subsidy disciplines is questionable, they are certainly more progressive regarding the promotion of support to clean and renewable energy (Marhold 2015).

---

47 See, in particular, on this, "Related Disciplines and Sources of Analogy," section 3 in Trachtman (2017), and for parallels with agricultural subsidies, Josling (2015).

48 Article 107 and 108 of the Consolidated Version of the Treaty on the Functioning of the European Union, 2008 OJ C 115/47.

Under EU law, two instruments are available for member states to comply with the EU rules on state aid. The first are the "Guidelines on State Aid for Environmental Protection and Energy 2014–2020" (European Commission 2014), which provide detailed instructions for EU member states on designing their support for green energy, ensuring that these remain in line with EU state aid law. The goal of the guidelines is to offer a market-based approach towards green energy support schemes, gradually decrease subsidies and ensure such support schemes are more responsive to price signals. Similarly, the WTO could develop such guidelines for its members, ensuring that members can design their support for green energy in a WTO-consistent manner *a priori*.

Second, EU state aid law provides for a sophisticated set of accepted "exceptions" to state aid rules in the form of the General Block Exemption Regulation (GBER).[49] As is well known, the ASCM does not provide for an exceptions clause, and the applicability of GATT Article XX to the ASCM is ambiguous and remains untested (Rubini 2015; Howse 2010). The GBER, however, in Section 7, Articles 36–43, declares certain elaborate categories of state aid towards green energy compatible with the internal market, provided that they meet the detailed and stringent requirements set out in the articles. When considering the reform of WTO rules on subsidies, the detailed and well thought-out EU Block Exemption Regulation could serve as a model for designing exceptions to the ASCM. The sooner such options are explored and discussed in the WTO, the better.

5.3 Including Fossil Fuel Subsidy Reform on the WTO Agenda

Although section 3 of this paper pointed out that trade-distorting aspects of dual pricing have been an ongoing issue of debate in the WTO for several decades, a wider discussion on the harmful effects and environmental impacts of FFS in the multilateral trading forum has been absent. Former Director-General Pascal Lamy emphasised that the inability to include talks on FFS reform was a missed opportunity:

> Similarly, the on-going political debate on reforming fossil fuel subsidies has largely bypassed the WTO. The surge in world energy prices in recent years has drawn high-level attention to fossil fuel subsidies, including by the G20. The link between subsidies, consumption of energy and climate change has added a new dimension to the debate. Given that WTO members have decided to tackle the issue of environmentally harmful subsidies in the fisheries sector as part of the Doha Round, the absence of this topic from the WTO radar screen can be considered as a missed opportunity. (Lamy 2013a; see also 2013b, 121)

However, nothing prevents FFS reform from becoming a topic of discussion in the WTO now, and there seems to be no better time, considering the low oil prices, and, more importantly, the climate commitments most of the WTO members have undertaken in view of the 2015 Paris Agreement and the Sustainable Development Goals. The WTO and its membership should therefore aim to include the topic of phasing out FFS on the WTO agenda immediately, or at least as quickly as possible. One way of ensuring this would be to issue a Ministerial Declaration during the upcoming 11th WTO Ministerial Conference, stressing the importance of phasing out FFS and mitigating climate change. At the outset, efforts should centre around awareness raising rather than binding commitments: the primary goal would be to ensure the issue of FFS reform is openly discussed in the forum in the first place, for instance within the framework of the Committee on Trade and Environment.

Apart from initiating discussions on FFS reform, the WTO could also contribute to

49 European Commission, Commission Regulation (EU) No. 651/2014 of 17 June 2014 declaring certain categories of aid compatible with the internal market in application of Articles 107 and 108 of the Treaty (Text with EEA relevance); OJ L 187, 26.6.2014, pp. 1–78.

more transparency on FFS through the Trade Policy Review Mechanism. As Asmelash argues, members' Trade Policy Reviews could include a category on FFS reform and restrictive practices in natural (energy) resources (Asmelash 2017, 14). This would allow a categorical review of countries' progress and actions in FFS reform.

Moreover, members should explore options for a plurilateral agreement on (sustainable) energy. Plurilateral agreements have a narrow group of signatories and are tailored to deal with issues of specific interest to a substantial group of WTO members. The agreements currently in force are the Trade in Civil Aircraft Agreement and the Government Procurement Agreement (WTO 2017). Several policymakers and academics have demonstrated what the advantages of such an agreement could be (Marceau 2010; ICTSD 2011). One of the main arguments it that the current WTO rules, although applicable, are not necessarily suited to dealing with the intricacies of the energy sector. A plurilateral agreement on (sustainable) energy could suit like-minded WTO members interested in a better-equipped set of rules on energy, and would moreover offer the perfect framework for elaborating on rules curbing FFS and constraining dual pricing. A potential agreement could contain a clause that would multilateralise concessions if a critical mass of WTO members become part of the agreement (ICTSD 2011, 63). Apart from policies constraining dual-pricing practices, the agreement could additionally focus on key trade-related issues for (sustainable) energy, such as tariffs, non-tariff barriers, subsidies, government procurement, services, export restrictions, domestic energy regulation, trade facilitation and transit issues (ICTSD 2011). It should be mentioned, though, that all members, even those that do not participate in the plurilateral agreement, would have to adopt it by consensus, as set out in Article X.9 of the WTO Agreement.[50]

For such initiatives to gain ground, it is moreover essential that the WTO builds bridges with other organisations and initiatives involved in FFS reform. This is imperative to avoid duplication and to strengthen and streamline existing efforts in FFS reform, allowing for a greater political push. This should go beyond coordinating efforts among the WTO and the G7 and G20. FFS reform initiatives in the WTO could also be linked to the United Nations Framework Convention on Climate Change and the commitments in the Paris Agreement, as the Paris Agreement stipulated that countries must regularly submit nationally determined contributions detailing how they will contribute to holding back a global increase in temperature of 1.5°C. These nationally determined contributions could contain sections on action undertaken in the area of FFS reform and could even be linked in this regard to WTO Trade Policy Reviews.

The WTO should also coordinate with other organisations involved in FFS reform, including the International Energy Agency and the International Monetary Fund. This process can start out as bottom-up exploratory talks on standardising terminology, monitoring and notification methods, as well as exploring the welfare policies needed if FFS are replaced.

50 Article X.9 WTO Agreement: Marrakesh Agreement Establishing the World Trade Organization, April 15, 1994, 1867 U.N.T.S. 154, 33 I.L.M. 1144 (1994).

6. CONCLUSION

Dual pricing policies have been at the centre of heated debates in the multilateral trading forum for decades. However, the focus of these discussions, mainly instigated by net energy importing WTO members, has predominantly been on the trade-distorting aspects of dual pricing, neglecting the significant negative impact that these practices have on the environment. The adverse effects of dual pricing on the environment emanate from the fact that countries sell their fossil fuel energy domestically at far below the global market price, thereby incentivising wasteful consumption and hampering the diversification of cleaner energy sources.

In view of efforts to combat climate change, the aim of this paper was to view dual-pricing practices through the lens of harmful fossil fuel subsidies. It demonstrated that curbing dual pricing could substantially contribute to emission reductions in line with the 2030 SDGs. This piece argued that the WTO is a crucial forum for facilitating this. It explored possibilities to curb dual pricing using options under the current legal toolkit, as well as suggesting amendments to current rules.

Under existing rules, WTO members opposed to dual pricing could challenge members maintaining these practices, for instance on the basis of GATT Articles XI (General Elimination of Quantitative Restrictions) and XVII (State Trading Enterprises). Dual pricing could moreover be challenged under the ASCM as an actionable or prohibited subsidy. The Anti-Dumping Agreement would also provide an avenue for curbing the practice when adjusting the "normal value" of the dumped product, considering the cheaper inputs of energy of the dumping country.

Subsequently, the paper explored how the WTO could tackle dual pricing beyond the existing rules of the multilateral trading system. It, inter alia, suggested revisiting the idea to amend the ASCM to include dual pricing as a prohibited subsidy under Article 3.1. Negotiators should examine the EU–Ukraine DCFTA provisions and the draft treaty texts in the context of TTIP negotiations for concrete examples on what form provisions on the prohibition of dual pricing could take.

The negative environmental impacts of dual pricing could also be offset by ensuring the creation of policy space to promote green energy, something that can be difficult to justify under current WTO subsidy rules at present. The design of rules on EU state aid can serve as an inspiration for this. In particular, the European Commission's Guidelines on State Aid for Environmental Protection provide a notable example on how EU member states can design their support policies for green energy in a way that is consistent with state aid law. Similarly, the WTO could draft a set of such guidelines for its members. Moreover, the WTO should consider amending its subsidy rules to exempt certain forms of support for green energy. The EU's General Block Exemption Regulation offers an elaborate model for what form such exemptions may take.

For any such efforts to be fruitful in the WTO forum, however, it is of utmost importance that the WTO includes broader discussions on fossil fuel subsidy reform on its agenda. While discussions may be initiated in a bottom-up, informal manner, they could lay the ground for the WTO to take tangible steps to increasing transparency and, eventually, reforming and reducing fossil fuel subsidies. For instance, transparency on the administration of FFS could be increased significantly by including a category on fossil fuel subsidies in members' Trade Policy Reviews. Last but least, WTO members should explore the issuance of a declaration on fossil fuels subsidy reform during the upcoming MC11.

REFERENCES

Asmelash, H. B. 2015. "Energy Subsidies and WTO Dispute Settlement: Why Only Renewable Energy Subsidies Are Challenged." *Journal of International Economic Law* 18: 261–85.

Asmelash, H. B. 2017. "Phasing out Fossil Fuel Subsidies in the G20: Progress, Challenges and Ways Forward." Think Piece. Geneva: International Centre for Trade and Sustainable Development (ICTSD).

Bagwell, K., R. W. Staiger, and A. O. Sykes. 2015. "Chapter 3: Border Instruments." In *Legal and Economic Principles of World Trade Law*, edited by H. Horn and P. C. Mavroidis. Cambridge: Cambridge University Press.

Behn, D. 2007. "The Effect of Dual Pricing Practices on Trade, the Environment, and Economic Development: Identifying the Winners and the Losers under the Current WTO Disciplines." https://ssrn.com/abstract=1151553.

Benes, K. J. 2015. "Considerations for the Treatment of Energy in the US-EU Transatlantic Trade and Investment Partnership." New York: Columbia/SIPA Center on Global Energy Policy.

Canuto, C., and T. C. Fienberg. 2003. "Natural Resource-Based Products." In *The GATT Uruguay Round: A Negotiating History (1986-1992) (Volume 1a: Commentary)*, edited by T. P. Stewart. Deventer: Kluwer Law.

Clements, B., D. Coady, S. Fabrizio, S. Gupta, T. Alleyne, and C. Sdralevich, eds. 2013. *Energy Subsidy Reform: Lessons and Implications*. Washington, DC: International Monetary Fund.

Coady, D., S. Fabrizio, M. Hussain, B. Shang, and Y. Zouhar. 2013. "Defining and Measuring Energy Subsidies." In *Energy Subsidy Reform: Lessons and Implications*, edited by B. Clements et al. Washington, DC: International Monetary Fund.

Cossy, M. 2012. "Energy Trade and WTO Rules: Reflections on Sovereignty over Natural Resources, Export Restrictions and Freedom of Transit." In *European Yearbook of International Economic Law*, edited by C. Herrmann and J. P. Terhechte. Berlin: Springer.

De Bièvre, D., I. Espa and A. Poletti. 2017. "No Iceberg in Sight: On the Absence of WTO Disputes Challenging Fossil Fuel Subsidies." *International Environmental Agreements* 17: 411–25.

Espa, I. 2015. *Export Restrictions on Critical Minerals and Metals: Testing the Adequacy of WTO Disciplines*. Cambridge: Cambridge University Press.

Espa, I., and S. E. Rolland. 2015. "Subsidies, Clean Energy and Climate Change." E15 Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum.

European Commission. 2013a. "EU–US Transatlantic Trade and Investment Partnership: Raw Materials and Energy." Initial European Union position paper. http://trade.ec.europa.eu/doclib/docs/2013/july/tradoc_151624.pdf.

European Commission. 2013b. "TTIP – Draft Non-Paper on Raw Materials and Energy" (EU Restricted). Brussels: Directorate-General for Trade.

European Commission. 2014. "Guidelines on State Aid for Environmental Protection and Energy 2014–2020." 2014/C 200/01, 28 June.

European Commission. 2016. “Note for the Attention of the Trade Policy Committee, TTIP: EU’s Proposal for a Chapter on Energy and Raw Materials in TTIP.” 20 June. Brussels: Directorate-General for Trade.

European Commission. 2017a. “In Focus: The Transatlantic Trade and Investment Partnership.” http://ec.europa.eu/trade/policy/in-focus/ttip/index_en.htm.

European Commission. 2017b. “State Aid to Secure Energy Supplies.” http://ec.europa.eu/competition/sectors/energy/state_aid_to_secure_electricity_supply_en.html.

European Parliament. 2016. “Export Taxes and Other Restrictions on Raw Materials and Their Limitation through Free Trade Agreements: Impact on Developing Countries.” Brussels: Directorate-General for External Policies.

European Parliament. 2017. “Fossil Fuel Subsidies.” Brussels: Directorate-General for Internal Policies.

Fliess, B., and T. Mård. 2012. “Taking Stock of the Measures Restricting the Export of Raw Materials: Analysis of OECD Inventory Data.” *OECD Trade Policy Papers*, No. 140. Paris: Organisation for Economic Co-operation and Development.

G7. 2016. “G7 Ise-Shima Leaders’ Declaration: G7 Ise-Shima Summit, 26–27 May 2016.” http://www.mofa.go.jp/files/000160266.pdf.

G20. 2009. “Leaders’ Statement: The Pittsburgh Summit: 24-25 September 2009.” http://www.g20.utoronto.ca/2009/2009communique0925.html.

G20. 2010. “Annex: G20 Initiative on Rationalizing and Phasing Out Inefficient Fossil Fuel Subsidies: Implementation Strategies and Timetables.” https://www.eenews.net/assets/2010/06/28/document_cw_03.pdf.

GATT. 1974. “The Impact of Higher Petroleum Prices on Developing Countries: Note by the Secretariat.” Committee on Trade and Development. COM.TD/W/208, 28 January.

GATT, 1987. “Uruguay Round, Group of Negotiations on Goods, Negotiating Group on Natural Resource-Based Products, Meeting of February 11, 1987: Note by the Secretariat.” MTN.GNG/NG3/1, 26 February.

GATT. 1989a. “Export Restrictions and Charges: Background Note by the Secretariat.” Multilateral Trade Negotiations, the Uruguay Round. MTN.GNG/NG2/W/40, 8 August.

GATT. 1989b. “Uruguay Round, Negotiating Group on Natural Resource-Based Products, Meeting of 13 and 14 July: Note by the Secretariat.” MTN.GNG/NG3/11, 10 August.

Graham, T. R. 1979a. “Reforming the International Law Trading System: The Tokyo Round Trade Negotiations in the Final Stage.” *Cornell International Law Journal* 12 (1): 1–42.

Graham, T. R. 1979b. “Results of the Tokyo Round.” *Georgia Journal of International and Comparative Law* 6: 153–75.

Graham, T. R. 1980. “The Reorganization of Trade Policymaking: Prospects and Problems.” *Cornell International Law Journal* 13: 221–37.

Horlick, G., and P. Clarke. 2016. “Rethinking Subsidy Disciplines for the Future Synthesis of the Policy Options” E15 Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum.

Howse, R. 2010. “Climate Mitigation Subsidies and the WTO Legal Framework: A Policy Analysis.” Geneva: International Institute for Sustainable Development.

ICTSD. 2011. “Fostering Low Carbon Growth: The Case for a Sustainable Energy Trade Agreement.” ICTSD Global Platform on Climate Change, Trade and Sustainable Energy. Geneva: International Centre for Trade and Sustainable Development.

IEA. 2017. “Energy Subsidies.” Database. International Energy Agency. http://www.iea.org/weo/energysubsidies/.

IEA, OECD and World Bank. 2010. “The Scope of Fossil-Fuel Subsidies in 2009 and a Roadmap for Phasing out Fossil-Fuel Subsidies.” Joint Report, International Energy Agency, Organisation for Economic Co-operation and Development and World Bank.

IISD. 2017. “Global Subsidies Initiative.” International Institute for Sustainable Development. http://www.iisd.org/gsi/.

Josling, T. 2015. “Rethinking the Rules for Agricultural Subsidies.” E15 Task Force on Rethinking International Subsidies Disciplines. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum.

Lamy, P. 2013a. “Lamy Calls for Dialogue on Trade and Energy in the WTO.” Speech to Workshop on the Role of Intergovernmental Agreements in Energy Policy, at the World Trade Organization, 29 April 2013. https://www.wto.org/english/news_e/sppl_e/sppl279_e.htm.

Lamy, P. 2013b. “Trade and Energy: The Case for a Greater WTO Role.” In *The Geneva Consensus: Making Trade Work for All*. Cambridge: Cambridge University Press.

Leal-Arcas, R., A. Filis and E. S. Abu Gosh. 2014. *International Energy Governance: Selected Legal Issues*. Cheltenham: Edward Elgar.

Marceau, G. 2010. “The WTO in the Emerging Energy Governance Debate.” In *Global Challenges at the Intersection of Trade, Energy and Environment*, edited by J. Pauwelyn. London: Centre for Economic Policy Research.

Marhold, A. 2013. “The World Trade Organization and Energy: Fuel for Debate.” *European Society of International Law (ESIL) Reflections* 8 (2).

Marhold, A. 2016. “WTO Law and Economics and Restrictive Practices in Energy Trade: The Case of the OPEC Cartel.” *Journal of World Energy Law and Business* 9: 475–94.

Marhold, A. 2017. “EU State Aid Law, WTO Subsidies Disciplines and Renewable Energy Support Schemes: Disconnected Paradigms in Decarbonizing the Grid.” *TILEC Discussion Paper* No. 2017-029. Tilburg: Tilburg Law and Economics Center.

Mavroidis, P. C. 2012. *Trade in Goods*, 2nd ed. Oxford: Oxford University Press.

Mavroidis, P. C. 2015. *The Regulation of International Trade*, vol. 1: *The GATT*. Cambridge, MA: MIT Press.

Pogoretskyy, V. 2009. “The System of Energy Dual Pricing in Russia and Ukraine: The Consistency of the Energy Dual Pricing System with the WTO Agreement on Anti-Dumping.” *Global Trade and Customs Journal* 4: 313–23.

Pogoretskyy, V. 2011. “Energy Dual Pricing in International Trade: Subsidies and Anti-Dumping Perspectives.” In *Regulation of Energy in International Trade Law: WTO, NAFTA and Energy Charter*, edited by Y. Selivanova. Alphen a/d Rijn: Kluwer Law International.

Pogoretskyy, V., and S. Melnyk. 2016. "Russian Energy and the WTO: Overview of the Accession Negotiations of the Russian Federation and Final Commitments." In *The Uppsala Yearbook of Eurasian Studies*, edited by K. Hober et al. London: Wildy, Simmonds & Hill.

Quick, R. 2010. "Dual Pricing." In *Global Challenges at the Intersection of Trade, Energy and Environment*, edited by J. Pauwelyn. London: Centre for Economic Policy Research.

Ripinsky, S. 2004. "The System of Gas Dual Pricing in Russia: Compatibility with WTO Rules." *World Trade Review* 3: 463–81.

Rolland, S. E. 2012. "*China – Raw Materials*: WTO Rules on Chinese Natural Resources Export Dispute." *ASIL Insights* 16 (21).

Rubini, L. 2015. "Rethinking International Subsidies Disciplines: Rationale and Possible Avenues for Reform." E15 Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum.

Schrijver, N. J. 2008. "Natural Resources, Permanent Sovereignty over." In *Max Planck Encyclopedia of Public International Law*, edited by R. Wolfrum. Oxford: Oxford University Press. Online edition, www.mpepil.com.

Selivanova, Y. 2007. "The WTO and Energy: WTO Rules and Agreements of Relevance to the Energy Sector." *Issue Paper* No. 1. Geneva: International Centre for Trade and Sustainable Development (ICTSD).

Selivanova, Y. 2008. *Energy Dual Pricing in the WTO: Analysis and Prospects in the Context of Russia's Accession to the World Trade Organization*. London: Cameron May.

Selivanova, Y. 2010. "Managing the Patchwork of Agreements in Trade and Investment." In *Global Energy Governance: The New Rules of the Game*, edited by A. Goldthau and J. M. Witte. Washington, DC: Brookings Institution Press.

Shih, W.-C. 2009. "Energy Security, GATT/WTO, and Regional Agreements." Natural Resources Law Journal 49: 433–84.

Steenblik, R. 2010. "Subsidies in the Traditional Energy Sector." In *Global Challenges at the Intersection of Trade, Energy and Environment*, edited by J. Pauwelyn. London: Centre for Economic Policy Research.

Tarr, D., and P. D. Thomson. 2004. "The Merits of Dual Pricing of Russian Natural Gas." *World Economy* 27: 1173–94.

Trachtman, J. P. 2017. "Fossil Fuel Subsidies Reduction and the World Trade Organization." ICTSD Climate and Energy Issue Paper. Geneva: International Centre for Trade and Sustainable Development (ICTSD).

UNCTAD. 2000. *Trade Agreements, Petroleum and Energy Policies*. UNCTAD/ITCD/TSB/9. New York: United Nations.

UNFCCC. 2015. "Adoption of the Paris Agreement." United Nations Framework Convention on Climate Change, Conference of the Parties, 21st Session. FCCC/CP/2015/L.9/Rev.1, 12 December.

USTR (United States Trade Representative). 2017. "Transatlantic Trade and Investment Partnership (T-TIP)." https://ustr.gov/ttip.

Van den Bossche, P., and W. Zdouc. 2013. *Law and Policy of the World Trade: Texts, Cases and Materials*, 3rd ed. Cambridge: Cambridge University Press.

WTO. 2005. “Report of the Working Party on the Accession of the Kingdom of Saudi Arabia to the World Trade Organization.” WT/ACC/SAU/61,1 November.

WTO. 2010. *World Trade Report 2010: Trade in Natural Resources*. Geneva: World Trade Organization.

WTO. 2011. “Report of the Working Party on the Accession of the Russian Federation.” World Trade Organization. WT/ACC/RUS/70, WT/MIN(11)/2.

WTO. 2017. “Plurilaterals: Of Minority Interest.” World Trade Organization. https://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm10_e.htm.

Wu, M. 2015. “Re-examining ‘Green Light’ Subsidies in the Wake of New Green Industrial Policies.” E15 Initiative. Geneva: International Centre for Trade and Sustainable Development (ICTSD) and World Economic Forum.

Yanovich, A. 2011. “WTO Rules and the Energy Sector.” In *Regulation of Energy in International Trade Law: WTO, NAFTA, and Energy Charter*, edited by Y. Selivanova. Alphen a/d Rijn: Kluwer Law International.

www.ictsd.org

Other recent publications from ICTSD's Programme on Climate and Energy include:

- How the WTO Can Help Tackle Climate Change through Fossil Fuel Subsidy Reform: Lessons from the Fisheries Negotiations
  Heloisa Pereira, 2017
- Fossil Fuel Subsidies Reduction and the World Trade Organization
  Joel P. Trachtman, 2017
- Phasing Out Fossil Fuel Subsidies in the G20: Progress, Challenges, and Ways Forward
  Henok Birhanu Asmelash, 2017
- Three-Dimensional Climate Clubs: Implications for Climate Cooperation and the G20
  David G. Victor, 2017
- Making the Global Economy Viable for the Future: A Trade and Climate Agenda for the G20
  ICTSD, 2017
- Global Rules for Mutually Supportive and Reinforcing Trade and Climate Regimes
  James Bacchus, 2016
- Enabling the Energy Transition and Scale-up of Clean Energy Technologies: Options for the Global Trade System
  Ricardo Meléndez-Ortiz, 2016
- Rethinking Subsidy Disciplines for the Future
  Gary Horlick and Peggy A. Clarke, 2016
- Subsidies, Clean Energy, and Climate Change
  Ilaria Espa and Sonia E. Rolland, 2015
- Securing Policy Space for Clean Energy under the SCM Agreement: Alternative Approaches
  Robert Howse, 2013

About ICTSD

The International Centre for Trade and Sustainable Development (ICTSD) is an independent think-and-do-tank, engaged in the provision of information, research and analysis, and policy and multistakeholder dialogue, as a not-for-profit organisation based in Geneva, Switzerland. Established in 1996, ICTSD's mission is to ensure that trade and investment policy and frameworks advance sustainable development in the global economy.