UiT The Arctic University of Norway

Faculty of Law

The Impact of WTO Subsidy Law on Renewable Energy Transitions

Analysing the Extent to Which WTO Subsidy Disciplines Pose an Obstacle to the Use of Green Subsidies and Support Schemes in Sweden and Finland

Emilie Tretow Busellato

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Abstract

Through the use of Sweden and Finland as case studies, this thesis project explores the use of support schemes to meet climate ambitions and facilitate green transitions. This author analyses these Nordic support schemes against the WTO subsidy disciplines and assesses their compatibility with this international framework, examining areas of friction where potential challenges or complaints could arise. Having highlighted the difference avenues for reform to provide Sweden and Finland with greater legal certainty in their employment of renewable support schemes with regards to WTO subsidy disciplines, this article argues that the most politically feasible and legally effective routes of reform are in Article 8 revival, amendments to the countervailing mechanism and process-based reform to enhance inter-WTO dialogue on subsidies.

Contents

Abbreviations

ASCM	Agreement on Subsidies and Countervailing Measures
CEEAG	Guidelines on State Aid for Climate, Environmental Protection and Energy
CEER	Council of European Energy Regulators
CHP	Combined Heat and Power
CJEU	Court of Justice of the European Union
COP	Conference of the Parties
CVD	Countervailing Duties
DSB	Dispute Settlement Body
EGD	European Green Deal
ETS	Emissions Trading Scheme
EU	European Union
EUR	Euro (€)
FIT	Feed-In Tariff
GATT	General Agreement on Tariffs and Trade
GC	Green Certificates
GBER	General Block Exemption Regulation
GHG	Greenhouse Gas
HOEP	Hourly Ontario Energy Price
IRENA	International Renewable Energy Agency
KWh	Kilowatt Hour

LCR	Local Content Requirement
MWh	Megawatt Hour
NDC	Nationally Determined Contribution
NECP	National Energy and Climate Plan
PV	Photovoltaic
REC	Renewable Energy Certificate
RED	Renewable Energy Directive
RED II	Renewable Energy Directive (recast)
RES	Renewable Energy Source(s)
SEK	Swedish Krona (kr)
SPS	Application of Sanitary and Phytosanitary Measures Agreement
TWh	Terawatt Hour
TRIMs	Agreement on Trade-Related Investment Measures
UNFCCC	United Nations Framework Convention on Climate Change
WTO	World Trade Organisation

Chapter 1: Introduction

"When the winds of change blow, some people build walls and others build windmills."

- *Chinese Proverb*

The recent decades have seen a significant shift in the conversation about the climate crisis, ranging from persistent political denial to fervent urging for action from the scientific community. As climate change reaches the forefront of the public consciousness and the sphere of global debate, political leaders seem keen to bandy about plans for a net carbon zero planet and goals for a clean, green future. The cornerstone of such green ambition is investment in alternatives to conventional fossil fuels and turning to renewable energy sources. As XU, one of the United Nations Assistant Secretary-Generals, noted in the run-up to the COP26 in Glasgow in 2021, driving forces from both the public and private sectors across the globe are creating an 'unstoppable momentum for clean energy' where he sees previously unrivalled 'political, economic, financial and business' impetus for green energy; indeed, he detailed the positive current trajectory of renewable energy generation development and the economic opportunity held therein, as well as outlining the wider context in which COP26 found itself, surrounded by two years of 'unprecedented clean energy commitments', particularly within the European Green Deal package.[1] These sentiments were echoed by the International Renewable Energy Agency (IRENA), noting that, whilst 'momentum is increasing', urgent work in the global energy transition to clean energy remains to be done.[2] It is perhaps indisputable in general debate that investment and development in renewable energy alternatives to power societies and industries, coupled with a tactical retreat from the current overreliance and ongoing support of fossil fuels, is a fundamental pillar in tackling the looming climate crisis.

As the environmental limits of the planet reach their tipping points, the winds of change have, quite literally, become more extreme and unpredictable. In an effort to combat these ferocious changes to the earth's climate and advance the socio-political changes to global infrastructure that they necessitate, many countries have begun to increasingly prioritise the development of their domestic capacity for renewable energy and have turned to the use of subsidies and price

[1] United Nations Development Programme, "Why We Must Accelerate the Energy Revolution at COP26", (1 November 2021).

[2] IRENA, "Increasing Momentum for Urgent Energy Transition Action", (15 November 2021).

support to underpin this advancement: to build windmills. However, this thesis seeks to explore whether the international regulatory framework on the use of subsidies, formed by the World Trade Organisation (WTO), might be considered to build walls against these efforts. The question to be answered is ultimately whether these walls are so extensive as to pose severe obstacles to the goal to develop meaningful expansion of renewable energy sources on the road to reach net-zero emissions. This thesis intends to examine this question through the use of two country specific case-studies, looking to the Nordic states of Sweden and Finland.

1.1 Delimitation of Scope

Given the wide range of potential avenues for analysis in this legal area, this thesis seeks to limit its scope to a critical legal analysis of Sweden and Finland, and their renewable energy generation development plans in relation to their climate goals and green ambitions. As EU Member States, limiting the scope of research to these two countries allows the thesis to delve into minor discussions surrounding EU State Aid law and the EU climate targets to which the countries are subject. Additionally, as will be explored in greater depth following detailed analysis into the topic, WTO issues arise where there is *trade* conflict which necessarily implies a certain level of cross border trade of electricity that has been subject to a domestic green subsidy or form of support scheme. As Espa and Duran note, incompatibility with the WTO Agreement on Subsidies and Countervailing Measures (ASCM) demands the existence of 'trade flows or opportunities in the subsidised product' between a state providing a subsidy and another, both being WTO members; whilst 'cross-border electricity' has previously been 'predominantly local', the European Green Deal, and indeed policies in other regions of the world, have placed an impetus on developing grid connection infrastructure which could bring this type of trade distortion and potential conflict to the foreground.[3] This is particularly pertinent for Sweden and Finland, who have strong interconnections with one another, and are participants in the highly integrated European electricity market and grid, as Member States.

1.1.1 Why Sweden and Finland specifically?

Amongst the other EU Member States available for analysis, the thesis has opted to turn its gaze to Sweden and Finland. A core reason for this focus is due to the high green ambitions and renewable achievements of both States. Indeed, Nordic Energy Research concluded that the Nordic countries all met their 2020 targets set in place by the Renewable Energy Directive

[3] Espa and Duran 2018, p. 625.

(RED)[4] 'two years ahead of schedule' whereas 'less than half' of the other EU Member States were 'on track' and that the share of renewable energy in the Nordic energy consumption was, at the time of writing last year, 'almost five times the EU average' and was growing at almost 'three times the pace'; the report highlighted that this 'green energy gap' could be partly attributed to the fact that the Nordic states are 'endowed with abundant renewable energy resources' as well as a strong socio-political impetus to drive development'.[5]

Notwithstanding this natural capacity, there is a strong correlation between the utilisation of renewable energy subsidies and the expansion of renewable energy industries. An IRENA report stated that environmentally friendly subsidies 'improve the efficiency of capital allocation across the energy sector', correct markets for 'unpriced externalities and enable renewable energy technologies to become more competitive, particularly against predominant fossil fuels.[6] This means that renewable energy subsidies are a key global driver for renewable energy deployment by facilitating their access to the market and ensuring support for nascent, emerging renewable technologies which would otherwise fail. By exploring the support schemes of two environmentally ambitious countries, this thesis will be more comprehensive in scope and will be able to demonstrate that the risks brought on by the WTO subsidy rules are not limited to one country. Additionally, if the WTO regime is demonstrated to hinder stronger efforts to support renewable energy development in these two highly economically developed countries, these challenges will be all the more signficant for EU Member States lagging behind in their green goals for 2030 and beyond, as well as countries around the globe.

1.1.2 Elements of Focus

Questions of renewable energy inevitably encroach upon a multitude of interrelated objectives, such as energy efficiency, security, and decarbonisation, as well as the deployment of renewable energy within different sectors. In order to navigate this interdependent web of dimensions and to narrow its scope, the thesis shall concentrate on renewable energy deployment with regards to the renewable generation of electricity rather than the heating and cooling sector or the transport sector. Examining this particular sector provides a rich area for discussion, given both the growth and debate surrounding it. As Espa and Duran note, the electricity sector has

[4] Note: Nordic Research Energy commented upon the previous RED which outlined 20-20-20 targets and has since been replaced by RED II which covers 2030 overall targets for renewable energy.

[5] Nordic Energy, "Nordics Lead Europe in Renewables", (4 May 2021).

[6] IRENA 2020, "Energy Subsidies: Evolution in the Global Energy Transformation to 2050", p. 9 and 12-14.

'performed the fasted in terms of progress towards decarbonisation' with renewable energy capacity growing 'at unprecedented rates in the last decade'.[7] Furthermore, Rubini notes that, whilst energy saving and efficiency support is 'readily endorsed by experts', the issue of renewable energy support is 'much more controversial'.[8]

By limiting the scope of focus of this thesis to the electricity sector and related support schemes, the thesis invites a stronger and more in-depth discussion of potential conflicts and challenges in the WTO arena. Indeed, it would be impracticably lengthy to invite a discussion of *all* measures in place within these three sectors and would touch upon such a multitude of support schemes as to undercut any detailed analysis. Therefore, though a rich topic for further discussion in other works, the exploration of the transport or heating and cooling sectors in Sweden and Finland remain out of the scope of this thesis. Furthermore, the research will hence be able to cover several different types of renewable energy sources. Sweden and Finland, whilst both producing a high share of renewables in their respective energy mixes, rely more heavily on different forms of renewable energy and, due to socio-political, geographic, and economic reasoning, have chosen to promote these renewable technologies in diverging fashions and through different measures. Thus, this thesis will be able to span support schemes concentrating on wind power, solar power, biofuels as well as hydroelectric and geothermal.

1.1.3 Interactions with EU Law

In outlining the policy objectives of Sweden and Finland and illustrating the way in which their green ambitions are directed under EU obligations, this thesis will briefly touch upon the operation of EU State Aid rules in governing the use of subsidies implemented by its Member States, particularly with a view of their oversight of renewable energy subsidies. However, the focus of the legal analysis of this thesis will be upon the compatibility of support schemes with the WTO subsidy disciplines, regardless of their compatibility with EU State Aid rules. Nonetheless, directing the concentration of this thesis upon two EU Member States has signficant analytical value. Firstly, as Ehlermann and Goyette note, the EU is 'unique' amongst the other WTO Members in 'applying a stringent internal subsidies regime' which is generally more constraining than the WTO disciplines.[9] Despite this, the possibility persists that subsidies

[7] Espa and Duran 2018, p. 624.

[8] Rubini 2012, p. 528.

[9] Ehlermann and Goyette 2006, p. 695.

employed lawfully within the EU may fall foul of the ASCM. Indeed, the mere existence of State Aid authorisation may create a concrete risk of conflict with the WTO disciplines since, as will be explored in greater depth in this thesis, the WTO currently makes no exceptions to the disciplines of the ASCM on the basis of the rationales underpinning a subsidy whereas the European Commission has enabled certain subsidies to be authorised on the basis of environmental objectives. Furthermore, there is no assessment of effects on international trade *ex ante* to authorisation under the EU State Aid framework which could provoke conflict with non-EU Members of the WTO. Therefore, notwithstanding the compatibility of the support measures discussed here with the EU State Aid rules and regardless of the justification of green subsidies by the EU, this by no means precludes similar conflict with the ASCM governing subsidies within the WTO arena.

Marhold speaks of the disconnected paradigms of the EU and WTO in the governance of renewable energy support schemes; whereas the EU, both in legislation and jurisprudence, has attempted to legitimise certain support schemes through its State Aid framework by considering the justifications of subsidies vis-à-vis the balance between trade distortive effects and climate mitigation objectives, the WTO disciplines have been comparatively constraining upon the legal space to pursue green policy goals through renewable energy subsidies.[10] One could argue that this friction between the two paradigms has become all the more exacerbated by the interplay between the decarbonisation goals of the EU and their ambitions to liberalise the energy grids. These disconnected paradigms provide a foundation for greater analysis of the WTO subsidy disciplines in this thesis, particularly with regards to opening up a sheltered space for green subsidies and taking account of the rationales behind certain subsidy usage. Additionally, due to this signficant disconnect with regards to the consideration of policy objectives behind support schemes, coherence with the EU State Aid rules and the WTO subsidy disciplines are by no means mutually inclusive. Indeed, this thesis could certainly conceptualise the potential for challenges from direct neighbouring countries to the EU, namely Russia, Switzerland and, now a non-EU Member, the United Kingdom (UK), related to renewable energy support. Irrespective of their validity under EU State Aid rules, the support schemes outlined within this thesis are not immune from complaint from beyond the EU.

[10] Marhold 2017, p. 3.

1.2 Objectives and Research Questions

This thesis aims to explore two intertwined overarching research questions. The primary aim is to answer whether Sweden and Finland, in the course of their energy transition towards renewable sources, face signficant resistance from the WTO subsidy regime in their use of support schemes and to what extent the WTO inhibits their energy revolution; in light of this potential resistance, this thesis intends to answer in which way the WTO subsidy disciplines can be reformed in order to ensure greater supportiveness of climate ambitions and renewable energy development goals in these two countries. In doing so, this thesis will tackle several sub-questions throughout the subsequent chapters, building successively on the ensuing analyses to reach a comprehensive conclusion. Each chapter shall be designated one or two sub-questions. Firstly, this thesis shall seek to establish the core policy objectives of Sweden and Finland with respect to the facilitation of an energy transition to 100% renewable energy generation domestically. Intrinsically connected to this question is a second point of analysis: what obligations are these two states under by virtue of their status as EU Member States?

Thirdly, the thesis addresses the core steps taken by Sweden and Finland in order to achieve these policy aims; the corresponding chapter examines the steps taken to support the development of renewable capacity in the form of support schemes, thereby addressing the core feature of this thesis: subsidies. The fourth, and pivotal, sub-question, which expounds upon the analytical foundations laid by the preceding chapter, is whether Sweden or Finland are at risk of falling foul of subsidy rules under the ASCM. Inextricably intertwined with this sub-question is both examining the minutia of these subsidy disciplines and exploring whether, and to what extent, Sweden and Finland's ambitious renewable energy development plans face challenges and risks of potential conflicts from other nations in the face of subsidy regulations.

Finally, Chapter 5 will seek to expand upon the extent to which current subsidy disciplines pose friction for the employment of renewable energy support schemes in Sweden and Finland and contextualise any potential conflict by exploring socio-political and legal factors influencing challenges before the WTO. Having utilised Sweden and Finland as an analytical springboard, this chapter discusses whether, in light of any hindrance of support of green development or legal uncertainty surrounding support schemes, there should be a revision of the subsidy disciplines to allow for more flexibility, leniency or even specific exception to renewable energy development in need of governmental support or intervention. This thesis will explore the potential for reform to the WTO subsidy regimes and scrutinise which avenues are most

feasible, anchoring the analysis to the impact such reforms would have on Sweden and Finland specifically.

Having answered these five sub-questions, this thesis will be well placed to formulate a comprehensive conclusion on its overarching objective to ascertain whether Sweden and Finland, on their respective pathways to a green transition, are indeed limited by the WTO, where the subsidy disciplines pose a potential or actual insurmountable hurdle in encouraging adequate support of the clean energy sector through support schemes. The conclusion will explore the factors underpinning such a hurdle, or lack thereof, as well as making a balanced assessment of the most practical routes for reform of the WTO to better facilitate harmony between trade and climate goals in Sweden and Finland, and indeed perhaps beyond.

1.3 Methodology

This thesis will predominantly employ a doctrinal legal research methodology, chiefly examining primary sources in the form of Swedish and Finnish national legislation, European Union legislative frameworks, and international regulations under the auspices of the WTO, namely the ASCM, among others. Thus, this thesis project will involve a composition of detailed analysis of current renewable energy support schemes in Sweden and Finland as well as a focused interpretation of subsidy rules in the WTO sphere in order to determine their validity, and the potential for trade conflict, actionability and even illegality. Throughout the course of research, this thesis will touch upon comparative legal research methodology in the sense that there will be an exploration of the potential for trade conflict by analysing previous WTO jurisprudence and interpreting these judicial judgments in light of the Swedish and Finnish domestic efforts, focusing strongly on legal terminology.

In terms of methodology, this thesis will seek to become comprehensive in its critical analysis by employing other disciplines in a more ancillary manner, by complementing the exploration of primary legal sources by scrutinising relevant material in a political context in order to delve into the wider policy objectives of the Swedish and Finnish governments in combination with the corresponding national legislation implementing these aims. This discussion of political motivations, within the national context as well as the trade conflict arena, will be seminal in facilitating a nuanced and richer exploration of the barriers to renewable energy deployment since the impetus behind trade conflict is often found in the socio-political, as well as the strictly legal. Furthermore, alongside primary sources, the thesis will delve into academic criticism in

the form of secondary sources to form a foundation to this critical examination. The research will draw upon academic commentary in the form of journal articles, books and chapters from edited books, as well as making use of contemporary resources such as official websites, legal blogs, and newspaper articles, albeit in a more restricted manner. This blend of primary and secondary sources from a variety of provenance will provide a wider and more comprehensive range of current resources and research, thereby enriching the analysis.

1.4 State of the Art

This section will summarise the focal secondary sources utilised in the research process and review the literature employed. The organisational pattern will concentrate on three main axes which have driven the need for this thesis to develop academic research in this topic and have been vital in providing foundational analysis and engagement for further scrutiny. Firstly, in the course of preliminary study, the thesis consulted the work of Fridolfsson and Tangerås, which consisted of an analysis of renewable electricity policy and regulation in Sweden.[11] However, it is notable that this scholarly contribution was made in the early 2000s, almost a decade ago. Indeed, even more recent works, such as Kilpeläinen's assessment of Nordic cooperation between Finland and Sweden in renewable electricity policy[12] and Palm et al.'s exploration of solar power development in Sweden, relied upon prior 20-20-20 renewable goals.[13] Nonetheless, these analyses are highly pertinent to the course of this research since the thesis is hence able to develop a strong familiarity with the specific regulatory landscape in Sweden and Finland. This thesis seeks to build upon this valuable early academic engagement in this area from an updated perspective, establishing a more current analysis and using the foundations laid by these academics to examine their renewable energy position in relation to the new energy goals under the revised Renewable Energy Directive (RED, now RED II) and WTO subsidies regulations in 2022, and the political drive in the aftermath of COP26.

Secondly, this thesis remarks that there is a wide range of legal commentary exploring the potential for reform to the WTO. Given the plethora of research into renewable energy development and subsidy issues, this thesis has benefited from developing a strong understanding of the diffuse academic perspectives regarding reform to the ASCM. From Farah

[11] Fridolfsson and Tangerås 2013.

[12] Kilpeläinen 2020.

[13] Palm et al. 2018.

and Cima, who argue for a best approach of application of Article XX GATT environmental exceptions,[14] and Charnovitz, who posits a revival of Article 8 to provide policy space for green subsidies,[15] to Shadikhodjaev, who views reform through the relaxation of the countervailing mechanism, this thesis has had the opportunity to interact substantially with academic contributions spanning the spectrum of the reformation landscape.[16] This thesis aims to consolidate the diverging perspectives on reform, exploring each one in turn and examining their political feasibility and legal potential in providing shelter for subsidies. Whilst many contributions to this topic exist, this thesis offers a novel perspective in two ways. Firstly, the thesis will draw on contributions to demonstrate the *need* for reform, as well as the place for reform, by exploring the role of fossil fuel subsidies, socio-political factors in driving conflicts in the WTO arena, and the friction caused by local content requirements. Secondly, by utilising critical legal analysis of Nordic support schemes and assessing the constraints posed on green policy space, the thesis will employ academic contributions as a foundation to apply it to the case studies and create a nuanced conclusion tailored to the current global context.

Finally, whilst a somewhat ancillary topic, the paradigm of EU State Aid has been given attention, with Ehlermann and Goyette, who explore the interface between the EU and WTO frameworks, helping to build an understanding of these two spheres of governance and their interactions, particularly in light of the use of two EU Member case-studies.[17] The work of Espa drew a substantive link on reform between the EU and WTO paradigms , which provided foundations to forge a more nuanced conclusion to this thesis, in drawing together the works regarding substantive reform as well as providing a more process-based view of change.[18]

Therefore, this thesis aims to provide a valuable contribution by forming a critical analysis in 2022 and pivot the examination forward, looking further into the future, and spanning multiple avenues for reform, ultimately leading to a nuanced and developed conclusion.

[14] Farah and Cima 2015.

[15] Charnovitz 2014.

[16] Shadikhodjaev 2015.

[17] Ehlermann and Goyette 2006.

[18] Espa 2019.

Chapter 2: Policy Objectives, Climate Targets and Green Ambitions

This section outlines the obligations under which Sweden and Finland fall by virtue of their EU membership. These EU wide-targets and, indeed, the EU commitment to the reduction of greenhouse gas (GHG) emissions under the Paris Agreement, have been translated into national objectives for each State, outlining their domestic targets and measures to advance these climate ambitions. By addressing these, this thesis aims to demonstrate the foundations upon which the use of support schemes for renewable energy emerge, as well as the inherent tension between the increasingly ambitious climate targets and international trade law.

2.1 What obligations are Sweden and Finland under as Member States of the EU?

The European Commission Communication on the European Green Deal (EGD) outlines the 'collective ability' and thereby responsibility of the EU and its Member States to enact environmentally ambitious policies to achieve the EDG objectives, namely, to increase the EU's climate ambitions for 2030 and 2050.[19] Additionally, the Commission published 'A Clean Planet for All', a Communication which outlined a strategic long-term vision for the EU and proposed the achievement of net-zero greenhouse gas emission within the EU by 2050.[20] This climate neutrality target has been enshrined in legislation to set a 'binding objective of climate neutrality' by 2050 where emissions would be reduced to net-zero by that date.[21] Article 2(2) states that Member States are under an obligation to 'take the necessary measures' at a national level 'to enable the collective achievement of the climate-neutrality objective'.[22]

More specifically, it is important to turn to the Energy Union. This is based upon five mutually supportive and reinforcing dimensions in the pursuit of a sustainable energy transition: energy security, the integrated internal energy market, energy efficiency, research and innovation, and decarbonisation of the economy. For the purposes of this thesis, the final dimension, decarbonisation, is foundational in guiding the direction of domestic policy action for Sweden and Finland. It delineates the commitment of the EU to retain its 'leading role in global investment in renewable energy'.[23] In the pursuit of the successful implementation of the Energy Union Strategy, the 'Clean Energy for All Europeans' package of measures was

[19] COM(2019) 640 final, p. 2.

[20] COM(2018) 733 final, p. 3.

[21] Art. 1, Regulation (EU) 2021/1119 Establishing the Framework for Achieving Climate Neutrality.

[22] Art. 2(2), Regulation (EU) 2021/1119 Establishing the Framework for Achieving Climate Neutrality.

[23] COM(2015) 80 final, p. 3.

published, designed to aid decarbonisation of the energy system in line with the EDG, the goal of a 'well- interconnected European network' and deliver on Paris Agreement commitments.[24]

Within this package, a key act is the Regulation on the Governance of the Energy Union and Climate Act, a robust governance system for the Energy Union; Article 1 establishes a governance mechanism based on 'long-term strategies' and 'integrated national energy and climate plans' (NECPs) for 2021 to 2030, corresponding to progress reports by Member States, and the Regulation applies to the five mutually reinforcing dimensions of the Energy Union.[25] Article 3 outlines the obligation of notification of these NECPs by Member States which describe each country's national objectives and their implementing measures corresponding to these objectives.[26] This is elaborated upon in Article 4 on 'national objectives, targets and contributions' and, referring to the dimension of decarbonisation, covers the requirement of Member States to outline their 'binding national target for greenhouse gas emissions' pursuant to Regulation (EU) 2018/842, to meet the long-term Union GHG emissions commitments 'consistent with the Paris Agreement' and, with regards to renewable energy, a contribution to the 2030 Union target.[27] This is explored below as a key point of reference in the Swedish and Finnish NECPs to understand their domestic renewable energy goals.

Another key component of EU climate ambitions is found in the Renewable Energy Directive (RED), the initial legal framework concerning renewable energy development. The RED specified the renewable energy targets placed on each Member State for 2020 and, as noted by the EU Science Hub, Sweden was on one end of the spectrum, with the highest 2020 renewable energy target amongst the Member States based on its potential for renewable development.[28] In light of the Clean Energy for All Europeans initiative, the RED was recast into the revised Renewable Energy Directive (RED II) where the key objective is 'promoting renewable forms of energy' as one of the core goals of the Union energy policy, with the understanding that this increased use of renewable energy sources is foundational to EU commitments under the Paris Agreement.[29] Article 3 outlines the binding overall target for the EU for 2030, where Member States shall 'collectively ensure' that the share of energy arising from renewable energy sources

[24] COM(2016) 860 final, p. 3 and 8.

[25] Art. 1, Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.

[26] Art. 3, Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.

[27] Art. 4(a), Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.

[28] EU Science Hub, "Renewable Energy – Recast to 2030 (RED II), (14 July 2021).

[29] Preamble, Directive (EU) 2018/2001 on the Promotion of the Use of Energy from Renewable Sources.

by 2030 is ‘at least 32%; Article 3(2) and (3) expands upon this, placing an obligation upon States to ‘set national contributions to meet, collectively, the binding overall Union target’.[30] Furthermore, Article 4 elaborates on support schemes for renewable energy sources, stating that Member States ‘may apply support schemes’ in order to either ‘reach or exceed’ the aforementioned target in Article 3(1) and their national contribution to that overall target.[31] To summarise, the core obligations under which Sweden and Finland fall are in the Governance Regulation to submit NECPs outlining their national objectives and measures, and in RED II, to set national contributions to meet the Union target for renewable energy sources.

2.2 Core Policy Objectives of Sweden

As remarked in the introduction, Sweden has often been heralded in the European community, and beyond, as a front-runner in renewable energy development and green ambitions. The cornerstone of the core climate policy in Sweden is found in the Climate Policy Framework of 2017, comprising of three pillars: the Climate Act (2017:720), a Climate Policy Council and the national goals for emissions reductions. This Framework presents the domestic ‘implementation of the Paris Agreement’ and is novel in the national context since it promulgated legislation under which the government had an obligation to ‘pursue a climate policy based on climate goals’ adopted by the Swedish Parliament.[32] As discussed under EU obligations, Sweden submitted an NECP, which elaborates on the Swedish climate goals and finds its basis on the aforementioned national Climate Policy Framework. The NECP underlines the compatibility of the domestic climate policy with the five Energy Union dimensions, critically the decarbonisation dimensions and the use of support schemes to enable this decarbonisation. Within the NECP, the important objectives and measures of the State are summarised: by 2045, Sweden aims to cut its ‘net greenhouse gas emissions to zero’ and, by 2040, has a target for 100% renewable electricity generation.[33] Although beyond the scope of this thesis, the use of nuclear energy within Sweden has been a fraught political conversation in recent decades and it is notable that the latter target is tempered by a note that this is merely a target, not a deadline or indication of policy decisions, in regards to nuclear power.

[30] Art. 3, Directive (EU) 2018/2001 on the Promotion of the Use of Energy from Renewable Sources.

[31] Art. 4(1), Directive (EU) 2018/2001 on the Promotion of the Use of Energy from Renewable Sources.

[32] Swedish Ministry of the Environment, “Sweden’s Climate Policy Framework”, (11 March 2021).

[33] Swedish Integrated National Energy and Climate Plan 2020, p. 5.

Interestingly, in line with point (a)(2) of Article 4 of the Governance Regulation, Sweden stated in their NECP that there were 'no national targets for the share of renewable energy in 2030' with respect to the binding overall Union target in RED II; instead, the draft integrated Energy and Climate Plan relied upon long-term scenarios from the Swedish Energy Agency in 2016 where the reference scenarios, based upon EU recommended conditions for national contributions to the common 2030 target, indicated a renewable energy share domestically accounting for '65% of gross energy consumption in 2030' in Sweden.[34] Nonetheless, the NECP and the Climate Policy Framework upon indicate a high level of domestic ambition with respect to renewable energy development. Indeed, Sweden signals this climate leadership by stating its objective to 'become the world's first fossil fuel-free welfare state'.[35]

2.3 Core Policy Objectives of Finland

Coincidentally, Finland has also set the aim of becoming the 'world's first fossil-free welfare society', indicating a similarly ambitious green policy to Sweden, as well as highlighting their objective to 'achieve carbon neutrality by 2035'.[36] Domestically, the general framework governing climate policy is the Climate Change Act (Ilmastolaki 609/2015), with the core goal to 'ensure the fulfilment of obligations under the treaties binding on Finland' and EU legislation.[37] The NECP submitted by Finland finds its main basis in the 2016 National Energy and Climate Strategy for 2030 which includes the aforementioned carbon neutrality and fossil-free objectives. To enable this achievement, the NECP outlines the amendment of the Climate Change Act to update the emissions reduction target for 2050 and to meet carbon neutrality by 2035, following long-term and medium-term climate change domestic policy plans.[38] Following the same rubric as the Swedish NECP, Finland elaborates upon its national objectives and targets, addressing the decarbonisation dimension. Core to the National Energy and Climate Strategy is the legislative ban of coal usage in energy production by 2030 and the reduction of GHG emissions in the effort sharing sector by 39% in 2030 compared to 2005 levels.[39] As part of this decarbonisation (and implied in the reduction of GHG emissions) is the shifting of reliance onto renewable energy. The NECP outlines a national renewable energy

[34] Swedish Integrated National Energy and Climate Plan 2020, p. 19.

[35] Ibid., p. 5.

[36] Finnish Integrated National Energy and Climate Plan 2019, p. 16.

[37] Section 1(2) point 1, Ilmastolaki 609/2015.

[38] Section 6, Ilmastolaki 609/2015.

[39] Finnish Integrated National Energy and Climate Plan 2019, p. 68 and 82.

target; this was initially set in the aforementioned 2016 national strategy as '50% of the gross final energy consumption'.[40] However, the European Commission exercised its right to issue recommendations, finding that it was below the indicative formula for Finland in the Governance Regulation.[41] In light of this, Finland reassessed its targets, setting a new 51% share as its 'national contribution to the Union's binding target of 32% of renewable energy' in 2030.[42] Therefore, the NECP demonstrates a strong commitment to promoting renewable energy to fulfil its RED II contributions and to deliver climate neutrality by phasing out fossil-fuel in combination to this target. Like Sweden, by indicating these high green ambitions, the country highlights a significant national contribution to the binding EU overall objectives, a high share of overall renewable energy and a commitment to meet their obligations as signatories to the Paris Agreement, both individually and as an EU Member.

2.4 EU State Aid Rules

In the pursuit of these objectives, the use of support schemes plays a key role in developing renewable energy industries and encouraging production in nascent green technologies. In the EU, these are governed by the State Aid framework. Article 107(1) of the Treaty of the Functioning of the European Union (TFEU) establishes the principle that State Aid is prohibited due to the propensity for such aid to threaten to distort competition within the EU internal market and inter-EU trade. Nonetheless, the Commission acknowledges the necessity of certain support schemes and that such aid finds compatibility with the internal market on the basis of Articles 107(2) and (3) TFEU, as well as obligation of Member States to notify the Commission of proposed State Aid as per Article 108(3). Article 107(3) point (c) encompasses green support measures, stating that they may be considered compatible with the internal market if they fulfil two conditions: the positive conditions that the aid is to 'facilitate the development of certain economic activities' and the negative condition that this aid 'does not adversely affect trading conditions to an extent contrary to the common interest'.[43] Additionally, the Commission has published guidelines to direct the use of green support measures, recently publishing the 2022 Guidelines on State Aid for Climate, Environmental Protection and Energy (CEEAG). This pertains to green aid subject to Article 107(3), point (c) TFEU notification and aligns the rules

[40] Finnish Integrated National Energy and Climate Plan 2019, p. 47.

[41] Arts. 31 and 34, Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.

[42] Finnish Integrated National Energy and Climate Plan 2019, p. 47.

[43] Art. 107(3), C202/1 Treaty on the Functioning of the European Union.

with the EGD objectives, recognising that the development of economic activities includes the improvement of environmental protection which, due to market failures, requires State intervention. The CEEAG outlines specific compatibility criteria applying to aid measures and provides guidance on how the Commission will 'assess the compatibility of environmental protection […] and energy aid measures' subject to Article 107(3) notification.[44] But not all types of green support fall under the notification requirement: the General Block Exemption Regulation (GBER) enables granting aid for investment and operation without prior notification and approval from the Commission, provided they fulfil certain criteria. The GBER's scope includes aid for environmental protection with an elaborate list of specific criteria covering conditions and intensity of aid, allowing States to implement support schemes compatible with the internal market.[45]

The Court of Justice of the European Union (CJEU) has provided guidance on green subsidies usage, developing interpretation of the legislative framework. Notably, in the *Preussen-Elektra* case, concerning a German feed-in tariff law, fairly analogous to the Canada case (discussed later), the CJEU made conclusions regarding public and private bodies providing aid, and concluded that the scheme was sufficiently removed from the government to not constitute state aid. However, the CJEU considered that, had a public body provided purchase obligation, it would have nonetheless been compatible with State Aid rules because the renewable electricity market was underdeveloped and thus, despite having a distortive effect by restricting market access, it was justified on the basis of its environmental protection objective.[46] Further, Mormann sees the approach taken by the CJEU in cases such as *Essent Belgium I* and *Ålands Vindkraft* as demonstrating the judicial willingness to uphold renewable energy support measures even where they 'restrict the free movement of goods' and indicative of a general 'judicial deference' to the EU legislature's 'aggressive climate and clean energy policies'.[47] Therefore, it is clear that the CJEU has indicated that policy objectives of green aid play a significant role in its compatibility with the State Aid rules and can trump economic effects.

[44] COM (2022/C 80/01), p. 8.

[45] Arts. 41 to 43 on investment aid and operating aid for the promotion of energy from renewable sources are particularly relevant to the support schemes employed by Sweden and Finland discussed within this thesis.

[46] C-379/98 *PreussenElektra AG v Schhleswag AG,* paras 72 – 80.

[47] Mormann 2021, p. 335.

Chapter 3: Core Steps and Case Studies

This section intends to address the specific steps that Sweden and Finland have respectively taken in order to facilitate the energy transition in their countries, namely the way in which support schemes have been utilised to encourage renewable energy generation development. The European Commission has set the stage for Member States to take such core steps, stating that 'energy markets alone cannot deliver the desired level of renewables' in the EU and that, in order to promote the requisite investment in renewable energy sources on a domestic level, support schemes are a necessity.[48] Indeed, RED II leaves it to the discretion of Member States to decide which support schemes they wish to implement in order to reach their contributions to overall targets and the RED II definitional section allows for a broad construction of the term support scheme.[49] As noted by the Council of European Energy Regulators (CEER) in a recent review of renewable support schemes in the EU, in terms of 'support instruments for promoting RES deployment', there are four key types of support schemes mainly in place in Europe; these are feed-in tariffs, feed-in premiums, green certificates (GCs) and investment grants.[50] The following section shall provide an overview of the schemes in place in Sweden and Finland, which conveniently span this typology of support schemes.

3.1 How is Sweden supporting renewable energy generation development?

The Swedish Energy Agency (Energimyndigheten) provides a clear overview of the domestic energy system, outlining that the main sources of electricity production arise from hydroelectric and nuclear sources, in a 45% and 30% contribution respectively; the remaining 25% originates from wind power and biofuel powered CHP plants, with less than 1% accounted for by solar energy.[51] Thus, renewable energy already accounts for the largest proportion of domestic energy production and fossil fuels have majoritarily been divested. This is affirmed by the Swedish long-term strategy for reducing GHG emissions for the UNFCCC, which outlines the cross-sectoral, overarching policy instruments and renewable energy promotion measures applied at a national level. The strategy highlights that wind power is 'undergoing extensive expansion' and continuous growth.[52] Furthermore, the Swedish Energy Agency underscores

[48] Art. 9(3), Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action.

[49] Art. 5(1), Directive (EU) 2018/2001 on the Promotion of the Use of Energy from Renewable Sources.

[50] CEER 2021, p. 12.

[51] Swedish Energy Agency, "Energy Use in Sweden", (14 July 2021).

[52] Swedish Ministry of the Environment 2020, "LT-LEDS", p. 27.

the domestic goal to invest in the currently limited solar market, which has found growth through 'aid of government funding.[53] These sources indicate a strong impetus to use support schemes to incentivise further increases in the total production of renewable electricity. The three core steps taken to promote of renewable energy are through a quota system in the electricity certificate system, a direct capital subsidy and tax regulation mechanisms.

3.1.1 Green Certificate Scheme

The cornerstone of the Swedish renewable support efforts is the Green Certificate Scheme which has been in place for almost a decade, governed by the Electricity Certificates Act (Lagen om Elcertifikat), with the preliminary target of increasing renewable energy production by 10 TWh by 2010 compared to 2002; it has since been extended until 2035, upon which the scheme will be terminated since targets for production will be met, and it was since amended in 2012 to become a joint electricity certificate with its Nordic neighbour, Norway.[54] Banja et al. describe the certificate scheme as a 'market-based support system for renewable electricity production' with the key objective of increasing renewable electricity production.[55]

Through this electricity certificate trading mechanism system, regulated by Act No. 2011:1200, a quota system is in operation which places a statutory obligation upon electricity suppliers and registered energy-intensive companies, as well as consumers who either use the energy they have produced or imported from the Nordic electricity market, to obtain renewable energy certificates (RECs) on an annual basis proportionately to their electricity sale, being issued one certificate from the Swedish state for every MWh of renewable electricity they produce.[56] These quotas increase annually for the length of the support system. Pursuant to Chapter 1 § 2, all renewable energy generation technologies (wind, solar, and geothermal energy, biogas, and hydropower) are eligible for the quota system. Under the quota obligation, renewable energy generators are able to sell their green certificates, which they are legally bound to obtain, to 'retail companies and to industrial consumers' on the open market which creates an added

[53] Swedish Energy Agency, "Energy Use in Sweden", (14 July 2021).

[54] Electricity Certificates Act No. 2003:113 since amended to Act No. 2011:1200 and Regulation No. 2011:1480 where Chapter 1 § 5 Act No. 2011:1200 outlines RES-E producers can receive and are permitted to trade certificates in both Swedish and Norwegian markets. This joint system is founded on a bilateral agreement between the two Nordic states, making use of the RED (now RED II) cooperation mechanisms.

[55] Banja et al. 2017, p. 164.

[56] Chapter 4 §§ 1 and 4, Act No. 2011:1200.

revenue to the existing value of their electricity sale which thereby 'raises the value of investing in renewable electricity production' as opposed to non-green energy sources.[57]

Since the quota obligations are a statutory requirement to obtain, this creates a strong demand for the green certificates which means that they maintain a value. In this sense, the certificate system is a hybrid: the implementing authority in Sweden, the Swedish Energy Agency, determines the number of certificates that producers are bound to purchase according to their output, but it is left to the market to regulate the price. The importance of this quota system is highlighted by IRENA who describe it as 'Sweden's fundamental policy instrument to support renewable electricity'.[58]

3.1.2 Solar Support

The solar photovoltaic (PV) market, being comparatively underdeveloped and underutilised as a form of renewable energy in Sweden vis-à-vis the prominent hydroelectric industry and competitive growth of wind and biofuels, has been the surprisingly long-term recipient of direct capital, on-budget subsidies in the form of the Regulation on State Subsidies for Solar Cells (Solcellesstöd/Investeringsstöd för Solceller). The Regulation 'form the basis of grants' covering all types of solar PV installation, thereby providing direct financial support to incentivise the uptake of solar PV installations.[59] For the period of 2016 to 2021 this financial support will have amounted to approximately SEK 4.5 billion.[60] § 5 par. 2 of the Regulation states that there is a designated maximum aid level of SEK 1.2 million for each solar PV cell system.[61] Banja et al. comment on the 'great interest' in this investment aid, with 'approximately 8000 applications' submitted by 2014 with around 3000 successfully receiving grants from the respective County Administrative Boards (Länsstyrelsen) of each province.[62]

However, following the Report for Sweden on Climate Policies and Measures, it is important to note that this subsidy has been lowered to maximum 10% coverage of costs from a previous 30% with the 'aim to end after 2021' based on Government assessments on the solar market in Sweden and only municipalities and companies were eligible for solar cell investment aid for

[57] Fridolfsson and Tangerås 2013, p. 58.

[58] IRENA 2020, "Innovative Solutions for 100% Renewable Power in Sweden", p. 100.

[59] Regulation No. 2009:689 on State Subsidies for Solar Cells, amended by 2011:1473 and 2021:855.

[60] Swedish Ministry of the Environment 2020, "UNFCCC LT-LEDS", p. 60.

[61] § 5 par. 2, Regulation No. 2011 :1473.

[62] Banja et al. 2017, p. 165.

2021.[63] Additionally, the Report refers to the 'incoherence of 2020' in regards to the capital subsidy support program for PV; for private individuals, the support has been closed for new applications since mid-2020 but, in light of economic instability and administrative delays resulting from the COVID-19 pandemic, applications remained open for municipalities and companies and completion periods have been prolonged accordingly, with the managing authorities being given additional resources to manage applications.[64] In regards to private individuals, the direct subsidy has been phased into a tax deduction for green investments. However, although there has been a stop to new applications to the solar PV subsidy, the support scheme can technically be seen to be operating nonetheless since applications have yet to be fully processed. Given both the longevity and cumulative expenditure of the programme, the thesis believes it warrants examination in regards to the WTO as one of the major and well-established support schemes for renewable electricity in Sweden. Indeed, Bellini argues that, on the basis of the high levels of funds made available to the rebate programme from 2009 to 2021 and the increase in Swedish operational PV capacity, solar generation 'will likely surge in the 2018 -22 period' in a manner in line with 'an anticipated rise in wind power output'.[65]

3.1.3 Tax Regulation Mechanisms

One of the most globally recognised tools employed by Sweden in pursuit of carbon neutrality is the CO_2 emissions tax. Certainly, it indirectly encourages the promotion of renewable energy since it presents an alternative to carbon intensive production. However, this thesis shall focus on two mechanisms directly designed to incentivise renewable energy production.

Firstly, as discussed in the gradual expiration of the direct capital solar subsidy, support for private individuals has been shifted to the tax reduction on the installation of green technology (Skattereduktion för Installation av Grön Teknik) which has been in place since the turn of 2021.[66] The green reduction acts as an amalgamate replacement of three support schemes: the solar subsidy, a subsidy for self-produced electricity storage (2016:899) and a subsidy for private installations of e-vehicle charging stations (2017:1318).[67] This forms a part of new

[63] Report for Sweden on Climate Policies and Measures and on Projections 2021, p. 23.

[64] National Survey Report of PV Power Applications in Sweden 2020, p. 41.

[65] Emiliano Bellini, "Sweden to Devote another $30.8 million to PV Rebates for Homeowners" (22 April 2021).

[66] Act No. 2020:1068 on the Tax Reduction Procedure for the Installation of Green Technology which amends Chapter 67 of the Income Tax Act (Inkomstskattelag) No. 1999:1229.

[67] National Survey Report of PV Power Applications in Sweden 2020, p. 45.

expansionary fiscal policy direction in the aftermath of the coronavirus pandemic where the Swedish government outlined its intentions to enable a 'powerful and green economic restart' and recognise the engagement of its citizens in the climate transition; in a budget statement, Sweden indicated the commitment to allocate SEK 200 million annually from 2021 to 2023 in regards to the new tax reduction for the installation of green technology.[68] Under the reduction, private individuals are able to receive a maximum deduction of 15% for the cost of labour and materials in the installation of solar cells, with a maximum cap of SEK 50,000.[69]

Secondly, as an amendment to the Income Tax Act[70], a tax deduction scheme 'on small-scale electricity production' was introduced in 2015 which entitles owners of small-scale renewable energy systems to a tax deduction, as long as they are a 'net electricity consumer'.[71] The scheme establishes a tax credit of 0.60 SEK/kWh for excess renewable electricity fed into the grid and 'applies to both physical and legal persons'.[72] Thus, the tax mechanism applies to both companies and private individuals, as long as the fuses do not exceed 100 amperes at the connection point and the tax reduction does not exceed the amount of 30,000 kWh.[73] This specification limits the application of the system to micro-generation of renewable electricity. As Palm et al suggest, this tax credit system promotes the utilisation of and investment in small-scale renewable energy generation, usually through solar PV, and the creation of 'prosumers' who both consume and produce electricity; furthermore, their analysis directly ties the Swedish 100% renewable energy system goals to the requirement of engaging households and private individuals in 'flexible energy consumption practices'.[74] Thus, it is arguable that the tax credit system is a key support scheme in both promoting solar PV installations in households, and other small-scale forms of renewable production, as well as contributing to the green transition by encouraging prosumers. Although Palm et al. regard the scheme from a solar perspective and logically domestic solar PV installations are more common as a small-scale generator, the eligible technologies include wind power, hydropower, geothermal and biomass plants.[75]

[68] IEA and IRENA, "Budget 2021: Tax Reduction on Green Technology Installation" (8 July 2021).

[69] Chapter 67 § 38, Act No. 1999:1229.

[70] Act No. 1999:1229 amended by 2014:1468 on Tax Deduction Scheme on Small Scale Electricity Production.

[71] Walla and Rigole 2015, p. 98.

[72] National Survey Report of PV Power Applications in Sweden 2020, p. 48.

[73] Chapter 67 § 27, § 30 and § 31, Act No. 1999:1229.

[74] Palm et al. 2018, p. 13.

[75] 67 § 27-29, Act No. 1999:1229.

The National Survey Report states that the tax credit system 'can be seen as a feed-in premium for the excess electricity' although it is important to note that, in comparison to European counterparts that explicitly employ feed-in premiums as support measures, this tax credit for micro-producers is not protected by a 'guaranteed revenue over a specific period' and therefore the benefit received by micro-producers in supplying excess electricity to the grid is subject to political decision-making, in that it can be increased or decreased as wanted by authorities.[76] On the report of the Swedish Tax Agency (Skatteverket), a total of SEK 150,844,066 was received by 60,699 micro-producers under the tax credit system in 2020 for excess electricity production from small-scale renewables fed into the Swedish grid.[77] Notably, the tax credit is received regardless of additional revenue or compensation, such as through the selling of renewable electricity certificates in the aforementioned certificate system.[78]

3.2. How is Finland supporting renewable energy generation development?

Similarly to its neighbour, Finland has demonstrated a high share of renewable energy generation domestically already. Indeed, it has been posited within the Finnish long-term low GHG emission strategy that 'the share of renewable energy will increase exceptionally fast through to 2035' by virtue of the ambitious carbon neutrality target, with the low-emissions scenarios projecting a vigorous increase of wind power generation with solar energy gaining similar momentum to 'further expand the renewables share'.[79] Unlike Sweden, hydroelectric does not represent such a high proportion of renewable electricity (although its share can hardly be said to be negligible), but rather wood bioenergy represents the highest contribution to the renewable share. Additionally, as noted by Kilpeläinen, alongside domestic biofuels, the Finnish energy supply is also reliant upon nuclear power and imported oil from Russia.[80] However, particularly in light of recent socio-political events, the phasing out of fossil fuels is both ongoing and gaining momentum. Within the Finnish NECP, a distinction is made between two types of support measure: operating or production aid, and investment aid. These can be found within the use of production aid for renewable energy sources producing electricity in

[76] National Survey Report of PV Power Applications in Sweden 2020, p. 49.

[77] Ibid.

[78] Ibid.

[79] Finnish Ministry of Economic Affairs and Employment 2020, "UNFCCC LT-LEDS", p. 13.

[80] Kilpeläinen 2020, p. 47.

the form of a sliding feed-in tariff (FIT) system, being amended to phase in a new premium system, and investment aid for renewable energy projects.

3.2.1 Operating Aid: Feed-In Tariffs to Feed-In Premiums

Initially foundational to the promotion of electricity from renewable sources was the sliding FIT scheme regulated by the Act on Production Subsidy for Electricity Produced from Renewable Energy Sources (1396/2010); however, as stated in the NECP, this aid scheme, which at its conception provided support for wind power, biogas and wood fuels, has 'been phased out', although it is important to note that new power plants receiving the aid before the closure continue to receive the aid 'up to 12 years from the start of production'.[81] Therefore, for the purposes of analysis of the support scheme under WTO rules, the feed-in tariff remains highly relevant since support is still available. Under Act No. 1396/2010, electricity produced from power plants 'fuelled with wind, biogas, forest chips and wood-based fuels' who receive approval by the Finnish Energy Authority (Energiavirasto) on the basis of 'prescribed preconditions' receive a production subsidy, which varies in accordance with a 'three-month electricity market price' or on the basis of the 'market price of emission allowances'.[82] [83] This essentially enabled electricity producers to make profit from the difference between the current electricity price on the open market and the target price (the tariff payment set by the support scheme), thereby creating a guaranteed price for the renewably sourced electricity.

The feed-in tariff has since been replaced by the new premium system.[84] Östring, in reference to Finnish Energy reports in 2017, draws the conclusion that the reason for this phasing out was that sufficient numbers of plants were accepted onto the tariff scheme, permitting the attainment of 2020 goals, in combination with the high cost of the scheme to the Finnish state.[85] This is supported by Koistinen, who estimated that the overall cost to the state will have amounted to 'over EUR 3 billion between 2011 to 2030'.[86] This phasing out began with wind power in 2017,

[81] Finnish Integrated National Energy and Climate Plan 2019, p. 93.

[82] Finnish Ministry of Economic Affairs and Employment, "Feed-In Tariff for Renewable Energy" (12 November 2016).

[83] The preconditions are economic and technical requirements for electricity generation, under § 7 Act No. 1396/2010 and Decree No. 1397/2010, on the Production Aid for Electricity from Renewable Energy Sources.

[84] Act No. 441/2018 on the Amendment of the Act on Production Aid for Electricity from Renewable Energy Sources.

[85] Östring 2020, p. 13.

[86] Antti Koistinen, "Tuulivoimatuen kallis moka halutaan välttää hintakilpailulla", (22 August 2017).

and continued to include closure for new wood fuel and biogas, and eventually forest chipping plants earlier last year, in 2021. The Act on the Amendment of Act No. 1396/2010 (441/2018) outlines the new premium system,[87] which opens up an electricity market for renewable energy 'based on a competitive tendering process' where renewable energy producers compete with one another via auctions, creating a more cost-effective promotion of renewable energy development compared to its predecessor.[88] Under the auspices of the Energy Authority, the instructions for the tenders are provided, with the tenders offered amounting to 1.4 TWh each year.[89] As under the preceding feed-in tariff system, the tender-based premium scheme is technology neutral for renewable energy producers, allowing producers of wind power, solar power, biogas and wood fuels to enter the tendering process.[90]

Through a competitive process, Finnish renewable energy producers submit bids known as binding tenders concerning the premium and quantity of renewable electricity they would be able to generate; the energy projects able to offer the lowest premium would be most successful in their bids and receive aid 'based on the premium stated on the tender' when the market price of electricity is either the same or lower as the reference price of electricity (EUR 30 per MWh) whereas a rise in the market price will 'reduce the premium-based subsidy'.[91] The NECP states that, in 2019, on the basis of the auction, the aid was 'granted for seven projects' all of which concerned wind power. Paukku notes, and indeed criticises, that, since the production subsidies are granted via tendering to 'the most cost-effective renewable energy production' this means that all subsidisation ends up funnelled towards onshore wind power with 'fewer incentives to invest' in alternative, less mature technology, creating a certain vicious circle of sorts.[92]

3.2.2 Investment Aid

As stated in Prime Minister Marin's Programme, a key measure in reaching a fossil fuel-free society is the development of energy aid schemes, by 'shifting the focus from production aid to

[87] Act No. 441/2018 on the Amendment of Act No. 1396/2010.

[88] Finnish Integrated National Energy and Climate Plan 2019, p. 93.

[89] Preparation for the Participation in Tender for Renewable Energy No. 1595/702/2018.

[90] § 5, Act No. 1396/2010.

[91] Dittmar & Indrenius, "The New Support Scheme for Production of Renewable Electricity Up to Tendering" (16 August 2018).

[92] Paukku 2021, p. 458-459.

grants supporting investments' in renewable energy technologies.[93] Thus, the use of energy aid schemes, essentially investment subsidies, are a key part of the Finnish decarbonisation and promotion of renewable energy generation. Generally, the granting of this form of aid is governed by the General Act on State Subsidies (Valtionavustuslaki), from which other decrees governing energy aid schemes find their legal basis.[94] Currently in force is the Government Decree on the General Conditions for Granting Energy Aid in 2018-2022 (known as the Energy Aid Decree).[95] Under § 5 of the Decree, it is stated that energy aid may be granted for investment in the production or use of renewable energy and, pursuant to § 8, whilst the aid is granted on a project-by-project basis, the maximum amount of aid made available may not exceed 30% of the eligible costs for renewable investment projects; additionally, in § 5(4) it is stated that priority is given to investments promoting the exploitation of new technologies.[96]

Similarly to Sweden, it seems as though the turmoil engendered by the COVID-19 pandemic has provided momentum for expansionary fiscal policy designed to prioritise green growth in Finland from out of the subsequent economic downturn. As an element of this policy change, as part of Finland's Recovery and Resilience Plan and Sustainable Growth Programme, the newly implemented Government Decree on Aid for Energy Investments (known as the RRF Energy Aid Decree) governs the use of funding from the Recovery and Resilience Facility of the EU and entails a subsidy scheme to 'promote energy investment and energy infrastructure projects' in harmony with the Sustainable Growth Programme and green transition entailed therein.[97] § 3 of the Decree states that the aid is, in the first round of applications which closed in March 2022, intended to support large-scale energy investments where 'the eligible costs of the project exceed EUR 5 million, with the Ministry of Economic Affairs and Employment exercising discretion over the granting of aid, and, pursuant to § 5, where the energy investment projects will reach completion by 30th June 2026.[98]

[93] Programme of Prime Minister Sanna Marin's Government, "Inclusive and Competent Finland", (10 December 2019), p. 37.

[94] General Act on State Subsidies (Valtionavustuslaki) 688/2001.

[95] Government Decree 1098/2017 (the preparation of the new Energy Aid Decree is in progress, to cover the period from 2023 onwards).

[96] § 5 and § 8, Energy Aid Decree 1098/2017.

[97] Finnish Ministry of Economic Affairs and Employment, "First Application Round for Energy Investment Aid under Finland's Recovery and Resilience Plan" (14 January 2022).

[98] § 3 and § 5, Recovery and Resilience Facility Energy Aid Decree 1112/2021.

Chapter 4: Conflicts or Compliance?

Having briefly outlined various support schemes in place in Sweden and Finland for the promotion of renewable energy, this thesis turns its attention to the potential for conflict arising from the availability of this aid. Chiefly, whether the schemes are compatible with WTO law.

4.1 The Rules on Subsidies: The Agreement on Subsidies and Countervailing Measures

The foundational regulatory framework is found in the ASCM which outlines the multilateral disciplines governing whether subsidy may be provided by a WTO member, alongside the 'use of countervailing measures to offset injury caused by subsidised imports'.[99] Part I of the ASCM establishes the definition of the term 'subsidy' and expands upon three basic successive elements, all of which must be satisfied to establish the existence of a subsidy.

The first condition, defined in Articles 1.1.(a)(1)(i) to (iv), is that there must be a 'financial contribution by a government or any public body' involving a 'direct transfer of funds', the foregoing of 'government revenue that is otherwise due', the provision of goods or services, or 'payments to a funding mechanisms'.[100] Alternatively, pursuant to Article 1.1(a)(2), there must be 'any form of income or price support' following the sense of Article XVI General Agreement on Tariffs and Trade (GATT).[101] Secondly, as a result of this financial contribution or price support, a benefit must be conferred.[102] The Appellate Body in *Brazil – Aircraft* put particular emphasis on the fact that financial contribution and benefit are 'two separate legal elements' which 'together determine whether a subsidy exists',[103] which was reinforced in *US – Export Restraints* by the Panel who stated that it was clear within Article 1.1. that the definition of subsidy had 'two distinct elements', referring to the financial contribution and benefit.[104]

Finally, there is a requirement of specificity under Article 1.2. On the assumption that a subsidy satisfies the meanings in Article 1.1, it will only be subject to the later parts of the ASCM if it has been 'specifically provided', a definition which is elaborated upon in Article 2. The rationale behind the condition of specificity is that a subsidy has inherent distortive effects on

[99] World Trade Organisation, "Subsidies and Countervailing Measures: Overview" (23 April 2022).

[100] Art. 1.1(a)(1)(i) to (iv), Agreement on Subsidies and Countervailing Measures, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1869 U.N.T.S. 14.

[101] Art. 1.1(a)(2), Agreement on Subsidies and Countervailing Measures.

[102] Art. 1.1(b), Agreement on Subsidies and Countervailing Measures.

[103] Appellate Body Report, *Brazil – Aircraft*, para. 157.

[104] Panel Report, *US – Exports Restraints*, para. 8.20. This was reaffirmed in *US – Softwood Lumber IV*.

resource allocation within an economy; should a subsidy be 'widely available within an economy', such a distortion may be deemed not to occur.[105]

4.2 Examining Support Schemes

It is perhaps useful to address that often the terminology for support schemes is used, in more socio-political circles, interchangeably with subsidies, in the sense that a support scheme is a form of state aid or governmental intervention. However, in relation to the WTO and ASCM, the definition of a subsidy is subject to a strict cumulative criterion. Having assessed a support scheme against Part I provisions and satisfying the 'definitional question', utilising the verbiage of Espa and Duran, Parts II and III tackle the 'consistency question'.[106] Essentially, drawing the basic distinction between prohibited and actionable subsidies respectively.

Under Part II, on prohibited subsidies, two categories of subsidies exist, namely export subsidies which are contingent on export performance, and local content subsidies which operate on 'the use of domestic over imported goods' and use local content requirements in their operation.[107] The use of these by Members of the WTO is not permitted. However, under Part III, if a subsidy is not categorised as prohibited, then it is actionable and thereby subject to challenge via the multilateral dispute settlement mechanism of the WTO or countervailing duties (CVDs) detailed under Part V may be applied.[108] In order to apply countervailing action or challenge to subsidy, the challenging Member must demonstrate that the subsidy causes adverse effects to their interests; these can take the form of 'injury to the domestic interests', 'nullification or impairment of benefits' that accrue under the GATT or 'serious prejudice.[109]

4.3 Entering the WTO Arena: Sweden and Subsidies

4.3.1 The Electricity Certificate System: The Quota System

The first hurdle for a hypothetical complainant against the Electricity Certificate System, and its embedded quota system to promote renewable energy generation, would be to establish that a financial contribution has been made 'by a government or any public body'. Following the

[105] World Trade Organisation, "Subsidies and Countervailing Measures: Overview" (23 April 2022).

[106] Espa and Duran 2018, p. 632.

[107] Art. 3, Agreement on Subsidies and Countervailing Measures.

[108] Part II and V, Agreement on Subsidies and Countervailing Measures.

Note: some subsidies may be deemed non-actionable under Part IV if they do not meet the specificity requirement or meet conditions under 8.2(a) to (c).

[109] Art. 5(a) to (c), Agreement on Subsidies and Countervailing Measures.

Appellate Body remarks in *US – Countervailing Measures (China),* the definition in Article 1.1.(a)(1) is a 'single legal standard', meant to encompass both 'government in the narrow sense' and any public body in the territory of a Member.[110] In embellishing this legal standard, the Appellate Body found that a consideration of 'whether an entity is invested with authority to exercise governmental functions' is vital in determining whether it is a 'public body' and this question differs from State to State.[111] Nonetheless, with the Swedish Grid Transmission Operator (Svenska Kraftnät) and the Swedish Energy Agency in charge of supervising the accounts of green certificates and monitoring the procedure of issue respectively, this condition of a 'public body' seems fulfilled since these authorities are state-controlled organisations carrying out government policy. However, in looking at the provision of a financial contribution, the waters become murkier. In accordance with the guidance provided by the Appellate Body in *Canada – Renewable Energy*, any 'proper legal characterisation' of a financial contribution should 'scrutinise […] its design and operation and identify its principal characteristics'.[112] Furthermore, *US – Softwood Lumber IV* highlighted that any evaluation of a financial contribution would involve 'consideration of the nature of the transaction through which something of economic value' is transferred to a recipient from a government.[113]

Certainly, there is a form of financial contribution made to the producers of the renewable energy generation in the sense that, as a result of the quota obligation, renewable energy generators are permitted to sell the certificates on the open market for an added profit margin to the sale of their generated electricity. However, the argument that this financial contribution arises from the statutory obligation to obtain a renewable energy certificate on an increasing quota basis is tenuous at best. The producers are legally bound to obtain the certificates, which are issued for every MWh electricity, regardless of the form of renewable energy technology employed to generate the electricity, *from* a public body.[114] The eventual financial contribution of added revenue arising therefrom, and the resulting argument to be made that a benefit is conferred since greater profit is made from the sale of the certificates in addition to the original electricity sale, is left to the functioning of the open market. Thus, although the obtainment of RECs has an eventual economic value, per *US – Softwood Lumber IV*, it does not truly fall

[110] Appellate Body Report, *US – Countervailing Measures (China),* para. 4.42.

[111] Appellate Body Report, *US – Anti-Dumping and Countervailing Duties (China),* paras. 317-318.

[112] Appellate Body Report, *Canada – Renewable Energy/Feed-In Tariff Program*, para. 5.120.

[113] Appellate Body Report, *US – Softwood Lumber IV*, para. 52.

[114] Chapter 3 § 2, Act No. 2011:1200.

within the meaning of financial contribution in Article 1.1(a)(1) since there is no direct transfer of funds by a government or foregoing of government revenue that is otherwise due.

Having established that it is highly unlikely that either a challenging Member or, in the hypothetical instance of a multilateral dispute, the Appellate Body would find the issuing of renewable energy certificates constitutes a financial contribution, this thesis finds that the quota system is indeed not a subsidy under WTO law. Although an argument could be made that it is an indirect subsidy, in that renewable energy generators ultimately receive a financial benefit through the eventual sale of the certificates on top of the sale of their electricity, this is a market-based mechanism that leaves the sale of the certificates to the open market, joined with Norway, and not in the hands of the Swedish government or public body.

4.3.2 Solar Subsidy

Under the expiring system of direct on-budget subsidies for solar PV installation, it is almost certain that the support of the solar industry in this fashion would satisfy the criterion in Articles 1 and 2. Firstly, it is simple to demonstrate that there is a financial contribution, per Article 1.1(a)(1)(i), since there is a 'direct transfer of funds' where grants are awarded to amount (originally 30%) to 10% of the eligible costs for a solar PV installation, including the costs of materials, labour and planning.[115] The Appellate Body has illustrated in multiple findings that the meaning of funds within Article 1.1(a)(i) will normally 'involve financing by the government to the recipient' and that, in the case of grants, such as the subsidy here, the 'conveyance of funds will not involve a reciprocal obligation' from the recipient.[116] Given the wide scope given to the direct transfer of funds in *Japan – DRAMS (Korea),* where the term funds was found to encompass 'not only 'money' but also financial resources and other financial claims more generally', it is certain that a grant in the form of direct capital solar subsidy would satisfy this element.[117]

The latter part of the element, of the contribution made *by* the government, is also both easily satisfied and explained. In Sweden, the only source of aid to industries is from the 'budget of the national government' and local governments are 'in principle prohibited by law to grant

[115] § 5 par. 1 and § 6, Regulation No. 2009:689.

[116] Appellate Body Report, *US – Large Civil Aircraft (2nd Complaint),* para. 617.

[117] Appellate Body Report, *Japan – DRAMs (Korea),* paras. 250-252.

aid'.[118] Whilst the funding of aid programmes, such as the solar subsidy, flows from the central government, the administration takes place at the local level. [119] With the provincial government, the National Board of Housing, Building and Planning and the Energy Agency acting as competent authorities for the decision of awarding of grants, the payment, and monitoring respectively, this certainly falls under this umbrella of a public body.[120]

In tackling the 'benefit' criteria, looking at the summary by the Appellate Body in *US – Large Civil Aircraft (2nd Complaint)* provides direction on this question: the ASCM seeks to identify whether, as a result of the financial contribution, the recipient is better off than it would have been absent of the contribution.[121] Taking into account the expansion of this under *Canada – Renewable Energy*, which introduced the central consideration of an advantage in relation to the position in the 'relevant market',[122] the Appellate Body demonstrates in *India – Sugar and Sugarcane* that, in order to establish the conferral of a benefit, an analysis should define the relevant market to provide 'an appropriate basis for comparison' since this would be foundational to identifying the 'trade-distorting potential' of the contribution.[123] In establishing whether the conferral of benefit here, it seems unambiguous that recipients of the direct solar subsidy, within the relevant solar PV market, are better off than counterparts who are not awarded the grant for installations.

In terms of the 'specificity' question, § 3 par. 2 of the solar subsidy regulation states that the provision of aid in the form of a grant is only available for the installation of solar PV, not any other form of renewable energy technology, or for hybrid installations for the generation of solar heat and electricity, pursuant to § 4 par. 2.[124] This might initially indicate a level of specificity. However, although the provincial government decides if and to what extent a grant for installation is awarded in both the preliminary and final decision process pursuant to § 8 par. 1 and § 13, this assessment is made by reference to objective criteria for an applicant to

[118] Notification by the European Union to the Committee on Subsidies and Countervailing Measures, *Addendum. 27 (Sweden),* p. 4.

[119] § 1, Regulation No. 2009:689. This provision states that the State bears the costs arising from the grant scheme.

[120] § 8 par.1, § 12, § 13, § 16 and § 18, Regulation No. 2009:689.

[121] Appellate Body Report, *US – Large Civil Aircraft (2nd Complaint),* paras. 635-636, 662 and 690.

[122] Appellate Body Report, *Canada – Renewable Energy/Feed-In Tariff Program,* para. 5.169.

[123] Panel Report, *India – Sugar and Sugarcane*, para. 7.257.

[124] § 3 par. 2 and § 4 par. 2, Regulation No. 2009:689.

fulfil to allow them to be eligible for the capital subsidy.[125] Therefore, per Article 2.1(b), which states that 'specificity shall not exist' where the granting authority 'establishes objective criteria or conditions governing the eligibility', there would seem not to be specificity, since the eligibility for the direct capital grant is automatic where the criteria are fulfilled.

However, this argument is somewhat muddied by the fact that, in the addendum to the notification made pursuant to Article XVI:1 GATT and Article 25 ASCM by the EU on the subsidy programmes of Sweden, it was noted that 'only specific subsidy programmes are included', referring to subsidies granted only to 'certain enterprises' following the meaning of Article 2 of the ASCM.[126] The direct capital solar subsidy was included in this notification addendum. Nonetheless, it could be argued that Sweden merely included the direct capital solar subsidy as a cautious manoeuvre within the notification addendum, although aware that specificity would be difficult to demonstrate due to the lack of discretion exercised by the provincial governments in the award of the subsidy in their stringent adherence to criteria. Additionally, in practical terms, it is unlikely that any WTO Member would challenge the support measure since it has officially stopped, with only outstanding applications delayed by the pandemic being processed by the regional authorities. In addition to the specificity element, it seems doubtful that any State would go through the burdensome and costly procedure of launching a complaint against Sweden for a subsidy which is in the termination stage.

4.3.3 Tax Regulation Mechanisms

In looking at the first element of the definitional subsidy question, it seems that the tax regulation mechanisms explored by this thesis, namely the green reduction and the micro-production tax credit, would satisfy the criterion of a 'financial contribution by a government' under Article 1.1(a)(1)(ii) since 'government revenue that is otherwise due is foregone'.[127] Indeed, the Article itself refers to 'fiscal incentives such as tax credits' which could quite easily be assumed to include the aforementioned measures. The Appellate Body concluded in *US – FSC* that a comparison has to be drawn between the government revenue actually raised versus that which would have been raised 'otherwise'[128] and, in this case, the Panel had applied a 'but

[125] § 8 par. 1 and § 13, Regulation No. 2009:689.

[126] Notification by the European Union to the Committee on Subsidies and Countervailing Measures, *Addendum. 27 (Sweden)*, p. 4.

[127] Art. 1.1(a)(1)(ii), Agreement on Subsidies and Countervailing Measures.

[128] Appellate Body Report, *US – FSC*, para. 90.

for' test in determining whether the revenue otherwise due had been forgone.[129] This test entails, in finding a 'normative benchmark' for the 'appropriate basis of comparison', an identification of the 'situation that would prevail but for the measures in question'.[130]

However, it is clear that the Appellate Body was hesitant in the use of such a 'but for' test and stated that, whilst possible to apply, Panels should instead compare 'the fiscal treatment of legitimately comparable income' in seeking a normative benchmark.[131] This guidance was succinctly summarised and applied by the WTO Panel in *US – Large Civil Aircraft (2nd complaint)*, whereby it found that the Appellate Body had suggested that, where possible, 'a general rule of taxation' can be identified through application of the 'but for' test whereas in other circumstances, a taxation measure under challenge should be 'compared to the treatment applied to comparable income, for taxpayers in comparable circumstances'.[132] This approach for Article 1.1.(a)(1)(ii) claims was confirmed by the Appellate Body in *Brazil – Taxation* and underlined the importance of identifying the tax treatment of comparably situated taxpayers in 'determining a benchmark for comparison'.[133]

Secondly, any challenge would have to demonstrate that, as a result of this provision of a fiscal incentive via tax deduction and credit, a benefit is conferred. Forming the foundation of judicial interpretation in this arena and interlinked with the former criterion, *Canada – Aircraft* provides that the 'only logical basis' in a determination of a conferral of benefit is whether the contribution is 'provided on terms that are more advantageous than those that would have been available to the recipient on the market'.[134] Indeed, the Appellate Body found that the tax exemptions and deductions subject to challenge in *India – Export Related Measures* conferred a benefit upon recipients since they were better off than they would 'otherwise have been absent that contribution' and, since 'relief from taxation otherwise due is not generally available to market participation' and does not subsist as a 'general condition in the marketplace', this left recipients with an advantage vis-à-vis the market.[135] Applying this reasoning to the green deduction and micro-production credit, which respectively provide a maximum deduction of

[129] Panel Report, *US – FSC*, para. 7.45.

[130] Appellate Body Report, *US – FSC*, paras. 90-91.

[131] Appellate Body Report, *US – FSC (Article 21.5 – EC)*, paras. 91 and 98.

[132] Panel Report, *US – Large Civil Aircraft (2nd complaint)*, para. 7.120.

[133] Appellate Body Report, *Brazil – Taxation*, paras. 5.167-5.168.

[134] Panel Report, *Canada – Aircraft*, para. 9.112.

[135] Panel Report, *India – Export Related Measures*, para. 7.451 and 7.458.

15% for installation of solar cells and establish a tax credit of 0.60 SEK/kWh, the tax mechanism leaves recipients better off than they would have been absent of the support scheme and in comparison to the general marketplace, for taxpayers in comparable circumstances.

However, despite potentially rather comfortably satisfying the first two aspects of the subsidy criteria, the micro-production tax credit finds safety from hypothetical challenge under the specificity question: pursuant to Article 2.1(b), where a granting authority, here the Swedish Tax Agency, 'establishes objective criteria or conditions governing the eligibility for […] a subsidy', specificity shall not exist and therefore neither does a subsidy, as long as eligibility to the measure is 'automatic' and the aforementioned criteria are 'strictly adhered to'.[136] Following Chapter 67 § 27 and 30 of the Income Tax Act, the provision of the tax credit is restricted to fuses of not more than 100 amps at a single connection point for supply and production of renewable electricity and that the reduction is capped at 30,000kWh.[137] Thus, since an objective threshold of 100 amperes fuse and a non-discretionary cap of 30,000kWh is set, thereby restricting the support the micro-generation, the specificity requirement is not met and, in the eyes of the WTO, no subsidy exists.

Similarly, a complainant would stumble at this hurdle for the green reduction on the basis of Chapter 67 § 36 of the Income Tax Act, which outlines who is able to request the right to a tax deduction for the installation of green technology, as well as the objective criteria for eligibility of installations, the form of dwelling to which an installation can be attributable, and the form of payment to an F-tax approach installation company.[138] Therefore, although the Income Tax Act and its specific amendments for these two mechanisms explicitly limit access to this tax reduction through these provisions, since the legislation outlines neutral criteria governing the automatic eligibility for the green deduction upon request, there is no specificity and hence no subsidy.

4.4 Finland: Subsidies or Not?

4.4.1 Feed-In Tariff Controversy

In the WTO arena as of late, FIT schemes have faced notorious ambiguity, controversy and uncertain legal status before the WTO Dispute Settlement Body (DSB) established Panel and

[136] Art. 2.1(b) Agreement on Subsidies and Countervailing Measures.

[137] Chapter 67 § 27 and 30, Act No. 1999:1229 (amended by 2014:1468).

[138] Chapter 67 § 36, § 38-39 and § 41-42, Act No. 1999:1229 (amended by 2020:1068).

Appellate Body, notably in the *Canada – Renewable Energy/FIT Program* challenge, which perhaps ironically arose from a complaint from the EU. In looking towards the Finnish feed-in system, the analysis shall utilise the judicial discussions arising from this complaint and then apply it to the Finnish scheme.

One element of the challenge against Canada was fairly uncontroversial: the claim under Articles III:4 and III:5 of the GATT and Article 2.1 of the Agreement on Trade-Related Investment Measures (TRIMs) that the use of a local content requirement (LCR) through a 'made-in-Ontario' condition for the FIT program were inconsistent with Canadian obligations under the WTO of non-discrimination since they accorded more favourable treatment to Ontario-produced equipment rather than imported products.[139] The use of LCRs is strictly prohibited within the WTO subsidy arena and the national treatment principle is a cornerstone to the organisation. However, the additional claim made by Japan, the EU and US who joined the claim, elicited far more judicial discussion. The complaint alleged that the FIT program amounted to a subsidy under the ASCM and, since it was provided contingent upon the use of domestic over imported goods, it fell under Articles 3.1(b) and 3.2 as a prohibited subsidy.[140]

This claim prompted both division within the Panel and Appellate Body, as well as widespread academic commentary, on the reasoning and fact-finding of the decision of whether the Canadian FIT amounted to a subsidy. Firstly, both the Panel and Appellate Body findings were in accord over the satisfaction of the first criterion; in response to the claim that the FIT measures at issue either constituted a direct transfer of funds or, alternatively, a form of income or price support, the Appellate Body upheld that Panel's conclusion that the Canadian FIT measures fell within Article 1.1(a)(1)(iii) as a financial contribution taking the form of a government purchase of goods.[141] This interpretation is explored by Wilke who concurs that this is logical, based on the fact that a FIT program provides a 'purchasing guarantee' and thus could potential qualify as a governmental purchase of goods, referencing the GATT 1947 definition in the Harmonised System Nomenclature of electricity as a good.[142] [143]

[139] Request for Consultations by Japan, *Canada – Renewable Energy,* p. 2.

[140] Ibid.

[141] Appellate Body Report, *Canada – Renewable Energy/Feed-In Tariff Program,* para. 5.128.

[142] Wilke 2011, p. 11.

[143] Harmonised System Nomenclature, General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194. 61 Stat. pt. 5; T.I.A.S. No. 1700.

However, in regards to the second element of establishing the conferral of a benefit under Article 1.1(b), dissent and convoluted legal reasoning prevailed. The Panel majority observed that there was a failure to establish the existence of a subsidy under Article 1.1(b).[144] Pursuant to Article 14 on the calculation of the amount of a subsidy, it is stated that the 'adequacy of renumeration' is determined 'in relation to prevailing market conditions for the good' in question.[145] This use of the market standard as a benchmark in determining whether a benefit is conferred by a subsidy was confirmed in *Canada – Aircraft* by the Appellate Body itself who observed that the marketplace provided an appropriate basis for comparison on the basis that the trade-distorting potential of a financial contribution (which indeed is the driving force of complaints before the WTO dispute settlement mechanism) was best identified by examining whether recipients of a subsidy had received a financial contribution of a 'more advantageous' nature than those available in the market.[146] On these grounds, the majority dismissed the allegations, stating that the Hourly Ontario Electricity Price (HOEP) did not serve as an appropriate benchmark against which to assess the conferral of a benchmark, chiefly since it was a market heavily and 'significantly affected by government intervention' rather than operating competitive wholesale electricity market.[147] However, this was met with dissent from one Member of the Panel who asserted that a benefit *was* conferred, expressing that the existence of a subsidy was demonstrated since the price guarantee offered to generators, previously economically constrained by high costs and lower efficiency than competitors, enabled entry to the wholesale market and receipt of renumeration from the Ontario market.[148]

Nonetheless, these remarks from both the majority and minority became rather overshadowed in the face of the Appellate Body's reversal of the majority's finding of a failure to establish the conferral of a benefit. The Appellate Body appeared to circumvent the core issue by stating that there was a failure by the Panel to weigh both demand-side and supply-side factors to verify the market to which the FIT belonged and then turn to the appropriate benchmarks within that market.[149] They found that the benefit comparison should be conducted within the parameters

[144] Panel Report, *Canada – Renewable Energy/Feed-In Tariff Programme*, paras. 7.320 - 7.327.

[145] Art. 14(d), Agreement on Subsidies and Countervailing Measures.

[146] Panel Report, *Canada – Aircraft*, para. 157.

[147] Appellate Body Report, *Canada – Renewable Energy/Feed-In Tariff Program*, paras. 5.147 – 5.153.

[148] Panel Report, *Canada – Renewable Energy/Feed-In Tariff Program*, paras. 9.1 – 9.1

[149] Appellate Body Report, *Canada – Renewable Energy/Feed-In Tariff Program*, para 5.169.

of the 'competitive markets for wind- and solar PV-generated electricity' instead of the wholesale electricity market.[150] In so doing, to utilise the terminology of Shadikhodjaev, the Appellate Body essentially 'provided a novel conceptual interpretation',[151] in stating that:

> "Where a government creates a market, it cannot be said that the government intervention distorts the market, as there would not be a market if the government had not created it." (para. 5.188) [152]

Having drawn this distinction between government intervention eliciting trade distortion in existing markets and government intervention that creates markets that otherwise would not exist, the Appellate Body finally concluded that, in taking this approach, there was a lack of 'sufficient factual findings' or basis upon which to complete the analysis of a benefit under the meaning of Article 1.1(b) and therefore a lack of grounds upon which to find whether the measures under challenge were prohibited subsidies.[153] For legal academics, this decision provoked widespread debate and muddied the waters for the use of FIT schemes since there was no definitive answer on whether a benefit was conferred since the Appellate Body, rather handily and convolutedly, found itself 'unable to complete the analysis'.[154] Charnovitz and Fischer allude to the political convenience for the WTO to avoid any judicial decision regarding whether a 'lucrative feed-in tariff' amounted to a subsidy under the ASCM and the unfortunate generation of 'new instabilities and uncertainties' for WTO Members at the expense of this side-stepping.[155] This is affirmed by Genest, who cited the 'unnecessarily complicated methodology' employed by the Appellate Body and the Panel and reluctance to use fact-finding powers in determining whether a benefit under Article 1.1(b) existed; he states that the Appellate Body's reasoning created a 'separate markets approach' and 'unduly complicated the benefit analysis mandated by the simply worded and contextually different Article 1.1(b)' by

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Note: The Appellate Body noted, in reference to this point, that the Panel had failed to follow precedent set by *EC and certain member States – Large Civil Aircraft* where the Appellate Body found that demand-side and supply-side considerations should both be taken account in the determination of the relevant market (Appellate Body Report, *EC and certain member States – Large Civil Aircraft*, para. 1121.)

[150] Appellate Body Report, Canada – *Renewable Energy/FIT Program*, para 5.178.

[151] Shadikhodjaev 2013, p. 873.

[152] Appellate Body Report, *Canada – Renewable Energy/FIT Program*, para. 5.188.

[153] Ibid., para. 5.246.

[154] Ibid., para 6.1(e)(iii).

[155] Charnovitz and Fischer 2014, p. 2.

placing disproportionate emphasis on Articles 6.3 and 14(d) of the ASCM, despite Article 14 providing only one way of demonstrating the conferral of benefit, not an exhaustive list.[156]

Therefore, applying this analysis to the Finnish scheme, it demonstrates the potentially uneasy footing upon which Finland may find itself. Certainly, the Finnish FIT is manifestly absent of any local content measures that would invoke the ire of WTO Members and provoke any complaint on the basis of the national treatment principle. However, following the Panel and Appellate Body interpretation, a financial benefit could be found under Article 1.1(a)(1)(iii) as the governmental purchase of goods since there is a price guarantee, albeit variable, under § 25 Act No. 1396/2010, which states that the premium tariff amounts to the difference between the average market price, dating to the past three months, and the fixed price, unless in the event that the market price sinks below EUR 30.[157] Additionally, in satisfying the criteria held in Article 1.1(a) that the financial contribution is made 'by a government or any public body', the Finnish Energy Authority is the entity in control of the payment of tariffs, the cost of which is funded by the Finnish state budget under § 2 of the Act.[158] Thus, it is fairly uncontroversial to assert that the first criterion of demonstrating the existence of a subsidy is fulfilled.

The second definitional requirement of the conferral of a benefit is less clear. For Espa and Duran, the Appellate Body decision has 'arguably made it harder for future complainants to demonstrate the existence of a benefit' (and thereby demonstrate that a challenged FIT program constitutes a subsidy under the ASCM) because it has narrowed the 'relevant market within which appropriate benchmark prices are to be located for the benefit comparison'.[159] Essentially, the Appellate Body reasoning makes it far less likely to find there is a benefit, since the benefit comparison would have to be taken, in the Canada case, in regards to competitive markets for the specific renewable sources covered by the scheme (there, wind- and solar PV-generated electricity) instead of the competitive wholesale electricity market, which would have quite easily demonstrated the conferral of a benefit. However, it would not be impossible. Looking at the Finnish requirements for entry to the premium tariff system, eligibility is for the generation of green electricity from biogas, wood fuels and wind power.[160] Following the Appellate Body separate markets approach, the benchmarks would be found within the specific

[156] Genest 2014, p. 242 and 250.

[157] § 25, Act No. 1396/2010.

[158] § 29 and § 2, Act No. 1396/2010.

[159] Espa and Duran 2018, p. 634.

[160] § 7, 9 and 10 Act No. 1396/2010.

markets for biogas, wood fuels and wind power. It seems that the Appellate Body left this question open to interpretation and criticism. In the event that a complainant could potentially and successfully demonstrate the conferral of a benefit, the element of specificity under Article 2 has remained untested before the Appellate Body.

Politically speaking, it is unlikely that the FIT scheme would find itself challenged. Firstly, it seems that the core foundation to the complaint was on the grounds of the LCRs imposed by Canada in the operation of the FIT scheme, rather than the use of a FIT scheme itself to promote renewable energy technology. The question of the existence of a subsidy was merely a legal-stepping stone to demonstrate the existence of a *prohibited* subsidy under Article 3.1(b) since the subsidy gave preference to 'the use of domestic over imported goods'.[161] In the WTO arena, green subsidies often appear to provoke international indignation on this basis, such as the more recent *India – Solar Cells* which relied on domestic content requirements. Given the consistency with WTO non-discrimination and national treatment obligations under the GATT and TRIMs Agreement, this thesis finds it unlikely that a complaint would be provoked to bring the existence of the FIT as a subsidy under question. This is similarly advanced by Espa and Duran who note that the 'jurisprudential approach' of the *Appellate Body in Canada – Renewable Energy/FIT Program*, whilst admittedly not a paragon of 'legal clarity', has had the eventual consequence of disincentivising the launch of complaints by WTO Members citing a claim under the ASCM as a result of discriminatory renewable energy support schemes; the focus of challenges on discriminatory components of green support measures is national treatment rules and non-discrimination provisions within GATT and the TRIMs Agreement.[162] Indeed, in the *India – Solar Cells* case, the initial claim of Article 3 ASCM inconsistency was withdrawn to favour a claim following a GATT and TRIMs route of argument.[163]

This is bolstered by a more practical factor, that the Finnish scheme has indeed been replaced by the tender-based premium scheme. Whilst it continues with the provision of a variable premium tariff to eligible generators for the specified 12-year period, it seems unlikely that, having been in operation for over a decade, a WTO Member would choose to challenge the measure at this juncture. Given the absence of any GATT or TRIMs violation, and the

[161] Art. 3.1(b) Agreement on Subsidies and Countervailing Measures.

[162] Espa and Duran 2018, p. 637.

[163] World Trade Organisation, "DS456 Summary: India – Certain Measures Relating to Solar Cells and Solar Modules" (28 February 2018).

narrowing of a scope by the Appellate Body in *Canada – Renewable Energy/ FIT Program* on market benchmarks, it is likely that this scheme will eventually lapse without any controversy.

Even as a potentially actionable subsidy, it is not obvious to demonstrate that a FIT system would cause adverse effects pursuant to Part III and Article 5 of the ASCM. Indeed, Espa and Duran state that, whilst it would be impossible to entirely exclude that a FIT scheme 'may be actionable and found illegal' under current WTO subsidy rules, even in the absence of any incorporation of domestic content requirements, this risk should certainly not be overstated.[164] Practically speaking, it is socio-politically improbable that a WTO Member would challenge a FIT program absent of any discriminatory measures; De Bièvre et al. point to the stronger likelihood that challenges would focus on discriminatory subsidies since these would 'directly harm the competitiveness' of domestic renewable manufacturing industries.[165] Additionally, in regards to the legal threshold to demonstrate the existence of an *actionable* subsidy, Espa and Duran make a highly valuable point: in order for a FIT scheme operating without any LCRs or discriminatory measures to be shown to cause adverse effects (and ipso facto being incompatible with the ASCM), there must be a dispute 'arising between WTO Members with interconnected electrical grids' who trade electricity amongst themselves.[166] Applying this nuanced analysis to this thesis' study of the Finnish FIT scheme, it is highly unlikely that the non-discriminatory support scheme would be challenged as an actionable subsidy; whilst, as discussed before, there is signficant cross-border trade of electricity within the EU as a result of the political and economic drive to develop the integrated European market, this would restrict any potential dispute to EU Member States, a challenge over which the Court of Justice of the European Union (CJEU) would exercise its exclusive jurisdiction to resolve within the EU arena, rather than spilling into the WTO settlement process.[167] Furthermore, supporting this stance, Charnovitz and Fischer argue that it is the domestic content requirement, as seen in the *Canada – Renewable Energy/FIT Program* case, that is most 'likely to distort trade' rather than the support scheme underlying it; since it is this trade-distorting potential that the WTO subsidy regulation seeks to prevent in the first place, the case for demonstrating an actionable non-discriminatory FIT scheme seems weaker and weaker.[168]

[164] Espa and Duran 2018, p. 638.

[165] De Bièvre et al. 2017, p. 395.

[166] Espa and Duran 2018, p. 639.

[167] Art. 344, C202/1 Treaty on the Functioning of the European Union.

[168] Charnovitz and Fischer 2014, p. 184.

4.4.2 The Move to a Tender-Based Premium Scheme

Echoing the Swedish approach to incentivising renewable energy deployment through the market-based system of energy certificates, Finland has chosen to move from a centrally administered FIT scheme towards a tender-based premium scheme through the amendment by Act No. 441/2018. In the wider global context, Espa and Duran point to an 'ongoing trend' in the 'choice of regulatory instruments' that aim to stimulate green electricity generation, with government's decreasing their generosity of price support measures and increasingly shifting from FITs offering an administratively guaranteed purchase price.[169] Certainly, in the EU context, this move by Finland is hardly surprising given that the recent CEEAG seeks to discourage governments from relying on traditional State Aid and to consider 'market-based instruments' as more worthy alternatives to 'promote increased levels of environmental protection'.[170] Mormann states that it is difficult to ignore that 'growing pressure' from the Commission for Member States to replace 'subsidy-esque support schemes' with more market-based programs, which would likely sidestep conflict with the WTO paradigm.[171] Incidentally, the Appellate Body spoke favourably of the use of 'price-discovery mechanisms such as competitive bidding' in *obiter dicta* in the *Canada – Renewable Energy/FIT Program.*[172] For Lydgate and Anthony, this judicial commentary on the mandated use of competitive bidding in support schemes such as tender-based premium systems makes 'any potential infringement of subsidy rules unlikely' and that non-compliance with the WTO regulatory framework should not be a 'main concern' for such support measures.[173] Therefore, in light of the Appellate Body's approach on the use of market-benchmarks in the context of demonstrating the conferral of a benefit under Article 1.1(b) ASCM, it seems unlikely that a premium scheme with a core annual tendering process would be interpreted as a subsidy.

Interestingly, at the time of writing, the EU has requested a consultation with the UK before the WTO on the basis of discriminatory practices in awarding subsidies for green offshore wind energy projects via Contracts for Difference (CfD); the foundation of the challenge is that the UK applies 'a local content criterion to determine the eligibility of operators' which incentivises

[169] Espa and Duran 2018, p. 635.

[170] COM (2022/C 80/01), p. 25.

[171] Mormann 2021, p. 331.

[172] Appellate Body Report, *Canada – Renewable Energy/FIT Program*, paras. 5.228 and 5.233.

[173] Lydgate and Anthony 2020, p. 6.

the operators of offshore wind farms to 'favour UK content in their applications'.[174] Being mindful of the current Finnish support scheme, a CfD within the UK could be seen as analogous to a tender-based premium scheme because they both promote renewable energy development through a competitive auctioning process. Indeed, both schemes have, through the nature of bidding systems intrinsically favouring more established renewable energy technologies, auctioned the majority of tenders to wind power applicants. As Bounds and Pickard note, the UK CfDs provide 'financial support to green energy practice' via a bidding process where, in practice, support is mostly given to offshore wind farms.[175] Thus, by requesting consultation, the EU might potentially be inviting the WTO to rule on whether the CfD, by virtue of the alleged discrimination of applying LCRs in the determination of eligibility of operators and thereby restricting the award of financial support to energy projects favouring UK content, is a prohibited subsidy. If so, if the consultation does not reach a satisfactory solution and the EU requests the formation of a WTO Panel to adjudicate on their complaint, the Panel would have to *prima facie* rule on whether a subsidy exists before addressing whether, as a result of the fact that award of the CfD is essentially contingent upon the 'use of domestic over imported goods', it is a prohibited subsidy.[176]

Looking at the request for consultations by the EU which circulated the communication to the DSB as per Article 4.4 of the Dispute Settlement Understanding, the EU finds the UK measures to be 'inconsistent' with WTO obligations, 'in particular Article III:4 GATT' since through the course of incentivising operators to implement an 'ambitious percentage' of UK content via the allocation of CfD, they are according 'less favourable treatment to imported goods than to like domestic goods'.[177] The foundation of this complaint is certainly reminiscent of the core objection of previous challenges to green subsidies, such as *India – Solar Cells* and *Canada –*

[174] European Commission, "EU Challenges Discriminatory Practices of UK's Green Energy Subsidy Scheme at WTO" (28 March 2022). Note: The EU has brought this matter before the WTO in order to resolve the matter. Under the WTO dispute settlement proceedings, the EU has requested the primary step of dispute settlement consultations; if these are carried out without mutually satisfactory resolution, the EU has the option to request the formation of a WTO Panel to rule on the matter.

[175] Financial Times, "EU Confronts UK Wind Turbines in First WTO Dispute Since Brexit" (28 March 2022)

[176] Art. 3.1(b) Agreement on Subsidies and Countervailing Measures.

[177] Request for Consultations by the EU, *UK – Contracts for Difference*, p. 3.

Note: This is the only formal document available for analysis at the time of writing 5 April 2022. There is a 60-day period within which a solution for both Parties can be found, otherwise a WTO Panel will be formed to adjudicate on the dispute.

Renewable Energy. However, the wording of the consultation request seems to imply that the EU already considers the CfD a subsidy, by referring to the 'payment of a subsidy' via the CfD auctioning. This potentially raises the question as to why the EU did not refer to the ASCM and challenge the CfD as a prohibited subsidy under Article 3.1(b) for being contingent on the use of domestic over like imported products. Perhaps a convincing argument could be made that, in light of the EU highlighting their reservation of the 'right to address additional measures and claims, including under other provisions of the covered agreements' in the request, the subsidy question may arise further down the process.[178] Additionally, there is a rationalisation that, post-*Canada – Renewable Energy*, it is easier to contest local content requirements and discriminatory measures under the umbrella of GATT Article III:4 (or under the TRIMs Agreement), rather than inviting a potentially convoluted interpretation and lengthy deliberation of a support scheme as a subsidy in order to determine whether it is prohibited.

Nonetheless this issue remains unsettled, and this thesis is hesitant to make any firm predictions as to the direction of this dispute. Indeed, Baschuk notes that, practically speaking, it might take 'several years' for this conflict to make its way through the 'backlogged dispute-settlement system' of the WTO; even if the EU finds victory before the WTO Panel, the UK would essentially be able to nonetheless 'veto the outcome' by appealing the Panel decision to the 'paralyzed' Appellate Body.[179] Certainly, as the consultation process continues and if the scope of the complaint expands, academics will shed light on the subsidy question. Regardless, in looking at Finland, specifically at the instructions for the tenders in Document No. 1595/702/2018 and Act No. 1396/2010 lay down the conditions for participation in the competitive bidding process and states that the Finnish Energy Authority shall organise the tendering procedure in a non-discriminatory and fair manner.[180]

4.4.3 Energy Investment Aid

Looking at the investment aid schemes analysed in this thesis, it appears that the initial examination resembles the course taken in exploration of the Swedish solar subsidy and the applicable ASCM interpretations of the WTO Panel and Appellate Body. For both energy aid schemes, there is a financial contribution by a government body in the form of a direct transfer

[178] Request for Consultations by the EU, *UK – Contracts for Difference*, p. 1 – 3.

[179] Bloomberg Green, "EU Lodges WTO Dispute Over UK Green Energy Subsidies" (28 March 2022).

[180] Document No. 1595/702/2018 and Act No. 1396/2010.

of funds to cover up to 30% (Energy Aid Decree)[181] and 45% (RRF Energy Aid Decree)[182] of eligible costs by the government via the competent authorities, the Financial Centre and the Ministry of Economic Affairs and Employment. A complainant could demonstrate conferral of a benefit as a result of the aid since it provides successful applicants a more advantageous position vis-à-vis their relevant markets in comparison to energy projects absent of any aid.

In regards to the specificity question, both the Energy Aid Decree and the RRF Decree could be seen to be specific. There are two state aid authorities with the competence of determining the provision of aid: Business Finland and the Ministry of Economic Affairs and Employment, who ultimately retain the exercise of discretion in terms of which projects receive financing and to what extent. The distribution of their competence is regulated in § 3 of both Decrees, whereby projects exceeding EUR 5,000,000 (or EUR 1,000,000 for projects related to new technology) are left to the Ministry and the granting of any other aid is left to Business Finland (Financial Centre).[183] Whilst the Decree uses language of discretion of the use of 'may be granted' (translated from Finnish), in practice, the state aid granted by Business Finland tends to be automatically eligible on the meeting of objective set criteria.[184]

However, the Ministry of Economic Affairs and Employment exercises a lot more discretion in their decision-making on submitted proposals. § 11 of the RRF Decree outlines the criteria for comparing aid applications, which is based on the effectiveness of the proposed project with the objectives of the Finnish recovery plan, taking into account the feasibility, energy impact and novelty value of the technology. The Energy Aid Decree contains even fewer references to any criteria but elaborates in 5 § 5 that priority is to be given to investment projects promoting the exploitation of new technologies. However, unlike the aforementioned Swedish granting of aid, these criteria are not 'strictly adhered to' and the decisions are made on the basis of the availability of the state budget, cost-effectiveness, and favour new emerging technologies. The Energy Aid Decree does not 'explicitly' limit access to the aid to certain enterprises but, looking towards Article 2.1(c) ASCM, the 'manner in which discretion has been exercised by the granting authority' as well as 'predominant use by certain enterprises' (here, newer technologies) are factors to consider in demonstrating specificity.

[181] § 8, Government Decree 1098/2017.

[182] § 9, Government Decree 1112/2021.

[183] § 3, Government Decree 1098/2017 and § 3, Government Decree 1112/2021.

[184] § 6 and § 7 Decree 1098/2017 and § 7 and § 8 Decree 1112/2021.

Therefore, whilst there is not *de jure* specificity within the Decree through explicit limitations of access, there could be de facto specificity due to this discretion. Indeed, the Panel in *United States – Subsidies on Upland Cotton* stated that the question of specificity was not a 'rigid quantitative definition' but could be proven on the basis that the subsidy is not 'sufficiently broadly available throughout the economy'.[185] In referring to this case law, Rubini remarks that the specificity test, in the context of renewable energy subsidies, could be very easy to fulfil regardless of whether the subsidy 'targets only a certain technology […] or certain uses' because of the fact that the clean energy industry constitutes only a 'small, albeit increasingly signficant, player in the energy market'.[186] This suggests, that since the aid would only be available for projects promoting the production or use of renewable energy according to § 5 of the Energy Aid Decree, it would be *de facto* specific since it is available only to one industry within the broader economy. Particularly given the promotion of novel technologies in both Decrees, the Panel approach in *EC and Certain Member States – Large Civil Aircraft* on 'predominant use by certain enterprises' would give weight to the indication of specificity.[187]

In light of this analysis, it could be likely that the energy investment aid schemes employed by Finland here might be construed as specific subsidies, falling under Part III of the ASCM as actionable. In this event, a complainant would have to demonstrate 'adverse effects' in the form of 'injury to the domestic industry of another Member' or 'serious prejudice'. As discussed above, any challenge to these schemes by another EU Member State would, in practice, not be launched through the framework of the WTO, but rather remain within the EU arena. However, as previous case law has demonstrated, threats of dispute do not necessarily arise from neighbours. For example, Marhold refers to the request for consultations from China (albeit on the basis of LCRs in Italy and Greece) against the EU, as well as the potential for challenges from the Russian Federation or the United Kingdom, particularly post-Brexit.[188] As precedence has demonstrated, a challenge before the DSB, absent of any domestic content requirements attached to the measure, might be difficult to envisage but as a potentially viewed actionable subsidy, it would not be impossible to imagine that countervailing duties might be applied in order to avoid the alleged trade distortive effect (adverse effects) on a WTO Member State.

[185] WTO Panel Report, *United States – Upland Cotton*, para. 7.1142.

[186] Rubini 2012, p. 548-549.

[187] Panel Report, *EC and Certain Member States – Large Civil Aircraft*, para. 7.966.

[188] Marhold 2017, p. 32.

Chapter 5: The Road Ahead

5.1 Assessing the Impact of WTO Subsidy Regulations on Sweden and Finland

In assessing the potentially constraining impact of the ASCM disciplines on the support schemes employed by Sweden and Finland, the thesis has firstly examined *whether* the WTO framework would likely find the existence of a subsidy, either prohibited or actionable, which would inform legal recourse from a WTO Member either via the multilateral (challenge before the DSB) or unilateral (the imposition of CVDs) track. It is important to note that, looking at WTO precedence in challenges, prohibited subsidies usually illicit complaint via the former route, whereas actionable subsidies are more likely to result in the imposition of trade remedies.

On the basis of the preceding legal review, it would seem that neither Sweden nor Finland would be in any immediate danger of complaint from WTO Members. Firstly, it could be posited that they have been rather conscious of previous disputes concerning renewable energy subsidies, which pivoted around the use of discriminatory LCR components and frictions arising therefrom and have hence modelled their policy deliberately or strategically to avoid falling afoul of subsidy disciplines in this regard, in potentially implementing prohibited subsidies that favour domestic goods. Furthermore, perhaps by virtue of their membership within the EU and the additional stringent requirements of non-discrimination and transparency for qualification for certain types of support under the GBER, both Sweden and Finland are conscious to avoid any reference or practical reliance upon LCRs. Indeed, Ehlermann and Goyette note, as EU Member States, their support measures, under the auspices of State Aid, are placed under far greater and 'extensive scrutiny prior to implementation' since, unlike WTO law, the Commission provides for an '*ex ante* assessment of planned State Aid'.[189]

Additionally, as Asmelash observes in relation to domestic content requirements attached to green subsidies, these conditions are usually employed by governments 'under the guise of creating local jobs' and thereby garnering 'political support for renewable energy technologies'.[190] However, it is arguable that these political motivations are somewhat absent in Sweden and Finland. These two countries, with high green ambitions, are already towards the end of their green transition, having already invested in and heavily developed renewable energy infrastructure. Therefore, with such naturally abundant resources conducive for hydro-electric, biofuel and wind power in particular, there is significantly less impetus to turn to LCR

[189] Ehlermann and Goyette 2006, p. 717.

[190] Asmelash 2015, p. 269.

measures to encourage further development. Compared to less economically developed countries, renewable energy policies are so longstanding that they already have strong political feasibility and social acceptability from citizens. Therefore, with LCRs being the core basis for most multilateral challenges to green subsidies, it appears that the support schemes examined above, all demonstrably devoid of such analogous attached LCRs, would not be at a high risk of dispute via the multilateral route, where previous challenges have been so selective.

Practically speaking, it is important to note that the Appellate Body currently remains deadlocked due to a US refusal to allow for appointments to fill the current judicial vacancies on the basis of 'systemic concerns' regarding the credibility of the DSB as a whole; however, most recently, Mexico spoke on behalf of 123 WTO Members expressing common concern over this deadlock crisis and, perhaps in the coming months, this extensive pressure may have brought an end to the current situation.[191] Nonetheless, procedurally and politically, at this time of writing, one could argue that it is highly unlikely that, combined with the lack of any obvious LCRs, a WTO Member would attempt to bring a subsidy under challenge before the DSB when it is thus crippled. As suggested earlier regarding the EU consultation on UK CfDs, any consultation request or formation of a WTO Panel could essentially be, albeit it (optimistically) temporarily, ultimately vetoed due to the lack of Appellate Body.

Finally, this thesis would suggest that neither Sweden nor Finland would be at a very high risk from the unilateral route, although this thesis would argue that this risk is higher than a multilateral challenge, particularly with regards to the Finnish energy aid schemes which seem to satisfy the criteria as specific subsidies. Most likely in taking this unilateral route in imposing CVDs as a remedy against a subsidy, a WTO Member would seek to demonstrate the existence of an actionable subsidy, meaning one that is creating an adverse effect. However, even if a Member were able to demonstrate the existence of a subsidy, which the preceding chapter ascertains as being a fairly cumbersome path, actionability would be a difficult hurdle to overcome. Indeed, as Espa and Duran explore, all specific subsidies that are not outright prohibited (namely, export subsidies and import-substitution subsidies' are only incompatible with the ASCM subsidy disciplines to the extent that it is demonstrated that 'they cause adverse effects' to the import-competing ('material injury') or export-competing interests ('serious prejudice') of a WTO Member; they stress that this is a 'notoriously difficult hurdle for a

[191] World Trade Organisation News, "Members Continue Push to Commence Appellate Body Appointment Process" (28 March 2022).

complaining party to prove'.[192] In considering the likelihood of this threat, this thesis would draw attention to the type of aid explored within its legal analysis. Most support schemes in question in this thesis are centred upon encouraging the production of renewable energy, rather than supporting the production of renewable energy equipment. The likelihood for trade distortive effects sinks since it is harder to demonstrate the flow of trade where production of electricity is 'predominantly local' in comparison to the 'global market' for renewable energy generation components which are 'traded intensively across borders'.[193] Thus, demonstration of adverse effects would only arise in the case of a 'dispute arising between WTO Members with interconnected electrical grids' who trade electricity among themselves.[194]

As broached earlier, whilst EU Member States have made signficant progress in developing a decentralised electricity grid and encouraging cross-border trade of renewable electricity, any subsidy-related dispute would be taken before the CJEU, rather than through the WTO, although theoretically speaking the EU States retain this right. However, as these industries and electrical grids become more developed, this threat may develop in turn; for example, if cross-border trade of electricity extended significantly beyond the EU Member States to Eastern European states and comprehensive integration of continental grids occurs, then the demonstration of adverse effects could become an easier obstacle to overcome. Furthermore, Brexit may present an interesting development in this regard, as a now non-EU Member is engaged in electricity trade with its former EU States. In the current state of affairs, Norway, a non-EU Member engaged with electricity trade with Sweden, namely, would be unlikely to mount a challenge given that it is a bilateral party to the RECs and quota system.

Nonetheless, despite ascertaining that the risk for challenge to these specific renewable energy support schemes in place in Sweden and Finland is fairly low, this thesis concludes that there remains a need for reform to the WTO subsidy disciplines. Indeed, throughout the preceding chapter, there was one word permeating the vocabulary of the legal analysis: uncertainty. In assessing support schemes, this thesis can merely speak in terms of 'likely' or 'unlikely', without concrete certainty of how a complainant might potentially interpret the ASCM disciplines or how a Panel might construe the language of provisions. Though this thesis readily acknowledges the causal loop paradox inherent to providing concrete evidence to this argument,

[192] Espa and Duran 2018, p. 633.

[193] Ibid., p. 625.

[194] Ibid., p. 638 – 639.

one could argue that this uncertainty disincentivises countries, Sweden and Finland and beyond, from using more ambitious green policy measures for fear that measures may be found prohibited or actionable, but due to the lack of clarity in the ASCM disciplines and the ambiguity in jurisprudence cannot ascertain the boundaries or limits to subsidy use. This is supported by Charnovitz who states that WTO rules 'encroach' upon green subsidies and law-abiding governments 'may refrain from using legitimate environmental measures' that could have 'generated positive outcomes' for climate change mitigation because they will not know *ex ante* whether a measure would meet the subsidy criteria and be under a threat of challenge.[195]

Firstly, this thesis provides by no means an exhaustive list of subsidies utilised by Sweden and Finland in their renewable energy development and, particularly in relation to the transport sector, more support schemes subsist which could potentially provoke the ire of WTO Members but are beyond the scope of this thesis. Secondly, only a limited number of green subsidies have produced any WTO Panel or Appellate Body reports so as to create guidance for the implementation of renewable energy subsidies specifically; particularly in light of the *Canada – Renewable Energy* case, uncertainty has become more pervasive in the use of green subsidies, with the Appellate Body leaving questions of specificity unaddressed and obscuring previous conceptions of benefit with its novel reasoning of market benchmarks. Finally, unlike the EU State Aid framework, there is no current recognition of the rationale behind subsidies, such as their justification as tools to contribute to climate change mitigation goals. Rubini even notes that, in the lesser-known obiter analysis by the CJEU in the *Preussen-Elektra* case, the court 'looked at its justification under Article 36' of the TFEU and concluded that it was justified because it was 'in line with the protection of the environment'; in his observation, he notes that Article 36 used Article XX of the GATT as its 'model' and that one could wonder whether the future might hold such an 'alignment of WTO and EU jurisprudence' in this regard.[196] This potential alignment, in regards to looking at the rationale behind subsidies, as well as providing clarity for green subsidies shall be discussed below.

5.2 A Need for Reform

Having established that the WTO subsidy disciplines may form a constraint upon green subsidies usage even for countries such as Sweden and Finland, this thesis will broaden its scope briefly to consider the more global factors and motivations for the potential need for

[195] Charnovitz 2014, p. 22 – 23.

[196] Rubini 2012, p. 567 – 570.

reform and the manner in which this reform may take place in order to better facilitate a global green transition through the use of renewable energy support schemes.

5.2.1 Brown versus Green Subsidies

In exploring the possibility of a momentum for WTO reform, it is interesting to introduce the use, and indeed global prevalence, of brown subsidies for economic assistance to fossil fuels. Interestingly, for the case studies of Sweden and Finland, it seemed, at least on the surface level, that the impetus is on placing economic and legislative pressure on the phasing out of fossil fuel reliance: for example, Sweden employs an emission reduction obligation for petrol and diesel in the transport sector and a carbon tax in industry,[197] and Finland, has passed an act to ban the use of coal in energy production as of 1 May 2029.[198] However, the use of brown subsidies demonstrates that the landscape is neither so simple nor green. In exploring fiscal policy levers, the Climate Transparency Report states that G20 countries, with the exception of Saudi Arabia, provided 'about US$ 127 billion in subsidies to coal, oil and gas in 2017', and, although the report noted that this represented an overall downward trend for the US$ 248 billion in 2013, subsidies to coal-fired power prevail steadily and subsidies to natural gas infrastructure have even increased.[199] Regardless of the general decrease in this subsidy provision, the fact that fossil fuels remain the recipients of subsidisation seems irreconcilable with the global alarm bells of looming climate crisis and, at best, in non-conformity with the alleged commitments of the G20 countries to phase out this support by 2020.

The European Commission acknowledges that 'continued efforts are necessary' in the phasing out fossil fuel subsidies which represent a clear incompatibility with the EU objectives in the recently adopted European Climate Law as well as their commitments under the Paris Agreement; the Commission cited that renewable subsidies were up by €6 billion in 2019 compared to 2015, representing an 8% increase but simultaneously reported that brown subsidies 'went up by €2 billion (+4%)' in this same period (with parallel decreases in 2020, due to the coronavirus pandemic's impact on fuel consumption).[200] It is both striking and worrying that in 2020 fifteen EU Member States, including Sweden and Finland, allocated more 'subsidies to fossil fuels than to renewable energies'; furthermore, between the period of 2008

[197] Act No. 2017:1201 on Reduction of Greenhouse Gas Emissions by from Certain Fossil Fuels.

[198] Act No. 416/2019 on the Prohibition of the Energy Use of Coal.

[199] Lena Donat et al. 2019, p. 9.

[200] COM (2021) 950 final, p. 3.

to 2019, these brown subsidies accounted for €55 to €58 billion annually, although 'two-thirds of these subsidies were tax exemptions or tax reductions'.[201] Thus, despite the G20 countries advocating for a stop to brown subsidies by 2020, the EU has delayed this commitment to 2025 citing socio-economic challenges in the phasing out.

Whilst there is a lack of discrimination in the ASCM since green and brown subsidies are technically judged by the same requirements, the reality demonstrates that there is a stark divergence in the number of challenges advanced towards green subsidies in contrast to their brown equivalents. Whilst not a single case against fossil fuel subsidies has been initiated before the DSB, six disputes have been launched on the multilateral track regarding renewable energy subsidies and support schemes; additionally, Opeida draws attention to the 41 trade remedy investigations in the clean energy sector between 2008 and 2014 in comparison to a complete lack of any unilateral remedies against fossil fuel production subsidies.[202] But, if the ASCM purports to be neutral against the purpose of a subsidy, why such a disparity? Asmelash points to the different common features of fossil fuel and renewable energy subsidy programmes, concluding that the 'existing multilateral subsidy rules' tend to be more suitable for the challenge of green subsidies, than brown ones; he points to the 'huge litigation and political economy costs' linked to initiating a dispute, balanced against the likelihood of success, as well as pressure from interest groups.[203] Indeed, private actors are often a driving force behind challenges but, in the case of brown subsidies, it is rarely in the interest of fossil fuel producers to challenge subsidised fuel or consumers, who benefit from them. Asmelash cites Article 11.1 of the ASCM to explain this lack of challenge to brown subsidies, since the provision requires the formal request of affected industries for Members to initiate CVD investigations, and fossil fuel producers are unlikely to be willing to place such pressure when it is not in their own economic interest.[204] Additionally, the regulatory framework itself, mostly in the form of the specificity requirement, is not conducive to successful challenges of brown subsidies. Opeida points to the practice of 'dual pricing schemes' as arguably 'one of the most harmful fossil fuel subsidies', yet simultaneously highly unlikely to be challenged under the ASCM because of a lack of *de jure* specificity and because they do not constitute as export subsidies.[205] This

[201] EU Observer, "15 EU States Subsidise Fossil-Fuels More Than Renewables" (1 February 2022).

[202] Linklaters, "Climate Change and Energy Subsidies: Is There a Role for the WTO?" (18 June 2021).

[203] Asmelash 2015, p. 278-279.

[204] Ibid., p. 284.

[205] Linklaters, "Climate Change and Energy Subsidies: Is There a Role for the WTO?" (18 June 2021).

commentary on common energy dual pricing schemes is supported by Shadikhodjaev who notes that these schemes are insulated from ASCM-authorised actions against export subsidies because they are 'applied across all economic sectors' and 'without purposive export promotion plans' which means they can hardly be curbed by WTO subsidy law.[206] This specificity is more easily satisfied by subsidies aimed at supporting certain forms of renewable energy since they represent a specific portion of the clean energy industry.

Thus, two mutually reinforcing arguments can be made in light of this analysis: firstly, it seems that, despite its neutral language, the ASCM disproportionately constrains green subsidies in comparison to its more harmful brown counterparts. Not only does the imbalance deepen the conflict between global environmental aims and trade, but it even seems at odds with the sustainable development goals themselves enshrined in the WTO Agreement. This creates greater incentive to carve out a policy space to provide explicit shelter for green subsidies to protect them from challenge or trade remedies. Concurrently, it is long overdue for the WTO to recognise the thoroughly detrimental, ironic and, indeed, economically unnecessary use of brown subsidies and acknowledge the way in which the present framework counterintuitively, in conjunction with socio-political factors, more easily enables fossil fuel support. The removal of brown subsidies is a 'necessary step in levelling the playing field for renewables'.[207] Certainly, this dimension to the subsidy framework has been widely recognised as deficient; Pascal Lamy, the former WTO Director-General, in response to fossil fuel subsidy reform, recognised the 'missed opportunity' by the WTO to address the disparity and the way in which the prevalent and damaging issue has bypassed the WTO and global agenda.[208]

5.2.2 Law…and Politics?

It appears almost impossible to divorce legal considerations of the WTO subsidy framework from their wider political and economic context. A prime example is our famous *Canada – Renewable Energy* case. Academics have touched upon the motivations in pursuing this challenge against the support scheme and these factors certainly reached beyond the purely legal. Indeed, observers noted that the local-procurement policy in energy development in neighbouring provinces to Ontario had never drawn complaint but, in the wake of the

[206] Shadikhodjaev 2015, p. 483.

[207] Asmelash 2015, p. 264.

[208] World Trade Organisation News, "Lamy Calls for Dialogue on Trade and Energy in the WTO" (29 April 2013).

combination of Japanese corporations being on 'the losing end of a US$ 20 billion nuclear power deal' with the United Arab Emirates and a highly beneficial $7 billion contract between the Ontario government and Korean competitor Samsung, Japan targeted the Ontario FIT and its attached LCR to 'avoid losing ground in the green energy arena'.[209] Thus, the conclusion could be drawn that other forces, aside from perceived violations of the ASCM itself, motivate challenges. Indeed, one could draw a similar link between the impetus to challenge green subsidies as opposed to brown subsidies in light of the strong corporate interests in maintaining fossil fuel reliance. Furthermore, as a nascent and emerging industry (although having certainly found a firmer foothold in the past decade), the clean energy sector, may become more susceptible to such political whims as the global community compete to become front-runners in the green arena. A safer space for such subsidies seems all the more crucial to protect them.

5.2.3 Pesky LCRs

It is clear to see the trend in WTO litigation was one targeting green subsidies employing an LCR component. This thesis does not seek to suggest so controversial a hypothesis that LCRs should be accepted by way of reform to the WTO framework. However, it is perhaps useful to understand the rationale behind its use in green subsidies. As Cosbey and Mavroidis note, there is an 'industrial policy rationale' to the use of LCRs in that, by attaching such requirements to a FIT or support scheme, it might achieve environmental gains by successfully propelling an infant industry, such as certain green technologies, into a 'mature innovating competitor' and make such environmental measures more 'politically feasible'.[210] Kuntze and Moerenhout add to these rationales for LCRs in green support measures by suggesting that their usage is a 'politically necessary tool in countries with budgetary constraints' which wins favour with citizens and gains domestic support for a green transition by the creation of green jobs. [211]

Indeed, these arguments seem convincing when one considers the fact that the Ontario FIT scheme was dismissed entirely following the challenge to its domestic content requirements, rather than merely removing the offending discriminatory components, which suggests the inability to justify the support scheme without the attached LCRs. This follows neatly from Bigdeli's argument that LCRs form a 'political necessity' to the 'very existence of RE deployment policies' in making the measure more palatable to the local community by

[209] ICTSD, "Japan Challenges Canadian Renewable Energy Incentives at WTO" (15 September 2010).

[210] Cosbey and Mavroidis 2014, p. 32.

[211] Kuntze and Moerenhout 2014, p. 179.

attracting domestic jobs and local benefits.[212] However, academics such as Espa and Salzman and Wu undercut this line of argument by suggesting that protectionist elements of these subsidies that have been thus-far challenged are hardly 'integral to the implementation of the pro-environment policy'[213] and point to the dispute of *China – Measures Concerning the Wind Power Equipment* as an example where attached LCRs were withdrawn to a Special Fund grant scheme without controversy.[214] Thus, having been the basis of the challenges targeting green subsidies, it is clear that the issue of LCRs is a hot topic and this thesis recognises it as another reason to create a safer shelter for green subsidies that do not contain discriminatory components and to encourage governments to implement green measures without fear of challenge on the basis of trade-distortive effects. Indeed, this position is supported by Nelson and Puccio who find that advocating for a full exception for LCRs would 'likely open a can of worms'[215] as well as Cosbey and Mavroidis, who nonetheless see the justification of such an exception to trade roles as 'not so much a slippery slope as a sudden cliff'.[216] However, all these academics point to other areas of potential reform, which this thesis shall now explore.

5.3 A Place for Reform

These preceding sections certainly strengthen the argument for creating a policy space for green subsidies and demonstrate a tension between international trade law and green ambition, leading to undeniable friction with renewable energy subsidies and the governing ASCM framework. This position is supported by Espa and Duran who see the *Canada – Renewable Energy* dispute as a catalyst for sparking the now 'conventional wisdom' of a clash between 'international climate change goals and WTO law' leading to both growing consensus and anxiety for reform to the WTO subsidy framework in order to safeguard a new green policy space for government support.[217] Indeed, even Sweden and Finland, countries with signficant renewable energy deployment, employ brown subsidies and therefore contribute to the pattern of treatment of green subsidies vis-à-vis fossil fuel subsidies. Furthermore, both countries are certainly susceptible to the same political and economic forces that have influenced previous challenges. This serves to demonstrate that the WTO is in need of reform, although there is

[212] Bigdeli 2014, p. 207.

[213] Salzman and Wu 2014, p. 445.

[214] Espa 2019, p. 991.

[215] Nelson and Puccio 2021, p. 504.

[216] Cosbey and Mavroidis 2014, p. 33.

[217] Espa and Duran 2018, p. 621.

divergence amongst legal scholars as to what form this should take. This thesis would seek to argue that, regardless of the manner, the WTO should acknowledge the rationale behind green subsidies, the role that they play in facilitating a green transition, both in Sweden and Finland, and across the world, in order to offer them legal shelter. But how might this shelter be offered?

5.3.1 Judicial Interpretation

An interesting starting point to explore is the role of judicial interpretation, although amongst the few renewable energy disputes, only two disputes have produced reports by the Appellate Body and Panel, in the actions against Canada. The Appellate Body in the now-familiar *Canada – Renewable Energy* case managed to 'take certain forms of subsidisation in the clean energy sector outside of subsidy control' through the market interpretation.[218] Some academics speak fairly favourably of this jurisprudence. Shadikhodjaev sees the Appellate Body as deserving of praise for carving out policy space for governments intending to promote green energy; he points particularly to the impact of the 'narrowed definition of the relevant market' and the 'exclusion of the government's market-creating role from the definition of subsidy' which provides safer haven for renewable energy support schemes since challenges will have to jump higher hurdles to demonstrate the existence of subsidy and thereby secure legal remedies.[219] Similarly, Charnovitz recognises the significance of the Appellate Body's conclusion because it had the effect of broadening the legal defences available for governments implementing green measures to favour a particular industry, pointing to the example of renewable energy portfolio standards employed by various countries.[220]

However, whilst providing a limited carve-out, it cannot be dismissed entirely that FIT schemes, or indeed other types of subsidies, will not be found in violation of the ASCM, more particularly as actionable rather than prohibited (where there are no LCRs). Certainly, other scholars have been less enamoured by the approach taken by the Appellate Body. For example, Rubini sees the result as a 'limited but unwarranted carve-out for certain types of subsidies' from the WTO subsidy disciplines, one with potentially troublesome implications.[221] He observes that the 'language of this carve-out is broad, vague and open-ended' and dangerously conceptual, rather than prescriptive; Rubini finds that the conclusion was legally and economically at fault because

[218] Rubini 2015, p. 12.

[219] Shadikhodjaev 2015, p. 487.

[220] Charnovitz 2014, p. 26.

[221] Rubini 2015, p. 12.

it fundamentally conflated the question of the existence of a benefit (and hence a subsidy) with the justification of subsidy, thereby radically moving into the realm of 'judicial creation'.[222] The limitations of the judicial interpretation are similarly recognised by Charnovitz who, in employing a tripartite matrix of policy space for green subsidies based on a three-colour topography, notes that the Appellate Body judgment lacked the clarity to move 'grey subsidies' (meaning subsidies of uncertain legal status, dependent on future interpretation of WTO rules or the economic effects of the specific measure) to a concrete 'mint' (safe) space which is 'most problematic because legal uncertainty may chill' investments.[223] This uncertainty is core to any reliance on favourable interpretation of green subsidies in the future; it is unlikely to comfort governments utilising support schemes that the Appellate Body seemed willing to manoeuvre around benefit questions in *Canada – Renewable Energy*, without any guarantee to provide similar shelter in future disputes, and this ambiguity might inhibit countries from pursuing more ambitious measures. As Cosbey and Mavroidis note, the environmental community cannot rely on the expectation that the Appellate Body will repeat its performance of 'legal acrobatics' and the incoherence of their legal methodology 'could hardly serve as precedent for resolution of similar conflicts in the future'.[224]

Whilst this thesis acknowledges the carve-out created by the Appellate Body, it cannot serve as a safe shelter for green government intervention since the bounds of interpretation remain lacking in clarity and any weather-proof shelter would require substantive reform to the ASCM to provide governments with a concrete basis to ascertain whether a subsidy would conflict with trade law. Thus, although creating a sliver of potential policy space, the development of the clean energy sector cannot hinge upon favourable judicial interpretation and, perhaps ironically, the methodology employed by the Appellate Body furthers the argument that reform is needed within the subsidy disciplines. Whilst issues may find clarification through litigation, this is certainly not optimal for countries wishing to implement measures since any clarity would come after a lengthy dispute before the DSB. As Rubini states, disputes are subject to 'many vagaries' and the solutions offered would be 'piece-meal and partial'.[225]

[222] Rubini 2014, p. 914 and 916.

[223] Charnovitz 2014, p. 23.

[224] Cosbey and Mavroidis 2014, p. 28.

[225] Rubini 2012, p. 578.

5.3.2 GATT Article XX Applicability

Beyond the DSB interpreting provisions of the ASCM framework itself, one potential avenue to be explored would be the applicability of GATT Article XX to the ASCM. This Article is a highly significant provision since it provides for a list of exceptions to WTO provisions and acknowledges that certain measures should be justified if they are necessary in the pursuit of particular public policy aims and are 'not applied in a manner' which constitutes 'a means of arbitrary or unjustifiable discrimination' or represents a 'disguised restriction on international trade'.[226] Within these list of exceptions, Article XX(b) concerning measures 'necessary to protect human, animal or plant life or health' and XX(g) which are 'relating to the conservation of exhaustible natural resources' are of interest regarding potential policy space for green subsidies. Indeed, Raslan sees the role of Article XX as balancing common societal values, such as environmental protection, with WTO trade rules, which are more bilateral in nature and cover the 'individual interests of states'.[227] Thus, given the willingness of the WTO to both recognise the value of environmental protection and to balance this against trade interests, in the face of tension between the international trade arena and the use of green subsidies, should and, indeed *could*, Article XX of the GATT apply to the ASCM?

Farah and Cima, in the proposition to find legal solutions to fix the 'environmental blind spot' of the ASCM, conclude that 'adopting a flexible interpretation' enabling the application of Article XX to the ASCM would be the 'best approach' for the cultivation of renewable energy and better balance the subsidy disciplines against trade concerns.[228] In advocating for its applicability, they forward three lines of argument. Firstly, they contend that in the hierarchy of WTO agreements, the GATT can be classified as *lex generalis* whereas the ASCM, which has a 'specific scope of application', qualifies as *lex specialis*; therefore, by reference to customary international law, it is not far-fetched to suggest that there is gap in the *lex specialis* in the form of the lack of environmental exception in the ASCM, which would allow Article XX to 'apply as *lex generalis'*.[229] In this vein, Rubini states that the spirit of the approach taken by Article XX advocates is that the Article has a 'natural expansiveness because of its central position in the GATT' as well as its 'general and broad wording, and its policy […] value'.[230]

[226] Art. XX, General Agreement on Tariffs and Trade.

[227] Raslan 2018, p. 919.

[228] Farah and Cima 2015, Time for Reform Toward Sustainable Development, p. 517.

[229] Ibid., p. 534.

[230] Rubini 2012, p. 562.

This could serve to support the argument that the WTO framework should be viewed in its entirety and that, with the GATT developed in other WTO agreements, Article XX should be construed as having a broader application beyond the singular undertaking of the GATT. Secondly, Farah and Cima point to a convincing logic that, by denying applicability of Article XX, it creates 'irreversible and unjustified policy inconsistencies' since the GATT could allow 'more distorting measures on environmental grounds' whereas the ASCM would ban less distorting subsidies on the same basis. [231] Finally, pointing to WTO case law, Farah and Cima see the Appellate Body approach in *China – Publications and Audiovisual Products* as an indication for a bolder approach to applying Article XX beyond the GATT, where it was applicable to Article 5.1 of China's Protocol of Accession.[232]

However, this thesis considers the arguments against the applicability more compelling. Primarily, there are certain textual barriers against the applicability of Article XX to the ASCM. Even in the aforementioned jurisprudence, quite crucially, the ASCM contains no general 'without prejudice clause' which was present in China's Accession Protocol, which undermines the likelihood of the Appellate Body applying it to the former,[233] and the specific clause in the China dispute referred to 'in accordance with the WTO agreement' which likely opened the door wider for GATT applicability, unlike the ASCM.[234] Furthermore, Wilke notes that in a 2011 decision, the availability of Article XX was denied to China as a defence to a breach of another provision, which lacked this reference to WTO agreements and observes that the Appellate Body 'carefully avoided any general statement that would support' the argument that, in the absence of an express reference to the contrary, Article XX is available to all WTO claims.[235] Wilke explores textual barriers more generally: pointing to the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement), which specifically refers to GATT Article XX and clarifies the relationship between the two agreements, she suggests that the comparative silence in the ASCM 'could thus indicate that Article XX GATT was not meant be available as a justification clause'.[236] Indeed, the ASCM itself makes reference to other agreements, such as in Article 3.1 to clarify the relationship with subsidies

[231] Farah and Cima 2015, Time for Reform Toward Sustainable Development, p. 535.

[232] Ibid.

[233] Farah and Cima 2015, WTO and Renewable Energy: Lessons from the Case Law, p. 1115.

[234] Wilke 2011, p. 19.

[235] Ibid.

[236] Ibid.

and the Agreement on Agriculture. This could bolster the argument against the applicability of Article XX since the negotiators of the ASCM deliberately chose not to incorporate such a distinction vis-à-vis the GATT. However, Rubini argues that Article 32.1 ASCM provides a similarly 'strong link' which reads that 'no specific actions against a subsidy of another remember can be taken except in accordance with the provisions of GATT 1994, as interpreted by this Agreement'.[237] Both sides of this argument provide valid arguments, but perhaps rather unsatisfyingly, this leaves the issue unanswerable without an express conclusion by the DSB based on their interpretation of these textual issues.

Linguistics aside, Asmelash finds further fault in the applicability of Article XX. He finds its application to the ASCM is 'untenable' because, even under the assumption that the DSB could interpret the presence of a textual basis to invoke it thereunder, he argues that 'domestic content requirements are unlikely to meet the two-tiered test'; for him, this explains the reluctance from Canada to invoke Article XX in response the challenge of the discriminatory FIT scheme in Ontario.[238] In expanding upon this question, Wilke draws attention to the fact that an Article XX analysis 'concerns the violation [of a WTO Agreement] and not the measure as a whole'.[239] Therefore, for example, a FIT contingent on local input requirements would need meet the Article XX standard whereas if a non-discriminatory FIT programme was found to be actionable under the ASCM for adverse effects, the FIT as a subsidy would fall within the 'necessary' or 'related to' legal analysis. Revisiting the language of Article XX(b), any subsidy seeking exception would have to overcome the challenge of establishing that a renewable energy subsidy constituted a 'necessary' use to achieve the environmental objectives and that the domestic content requirements or the subsidy as a whole do not result in 'arbitrary or unjustifiable discrimination'.[240] For either discriminatory or non-discriminatory support schemes, Rubini argues that the first element could be satisfied fairly easily, given the balance between environmental objectives and trade restrictions, climate change is a significant and weighty concern and would be likely to meet the necessity test.[241] However, Espa and Duran suggest that the key question would be whether there would be 'any less trade-restrictive

[237] Rubini 2012, p. 566.

[238] Asmelash 2015, p. 280.

[239] Wilke 2011, p. 20.

[240] In *Brazil – Measures Affecting Imports of Retreaded Tyres*, para. 151., the Appellate Body indicated that climate change mitigation measures may fall under Article XX(b) in principle.

[241] Rubini 2012, p. 566-567.

measure(s) reasonably available' to make an equivalent contribution to the policy goal, which would substantially undermine its 'necessity'.[242] Furthermore, they argue that the current interpretation of Article XX(b) focuses on the trade-restrictive impact of measures, whereas the trade-distortive effects of a subsidy stretch beyond impeding imports into the market of the subsiding WTO Member and therefore is a 'broader notion than trade restrictiveness under Article XX' which could be troublesome for its applicability as a defence. Finally, if a renewable subsidy contained an LCR, it would be difficult to argue for its necessity. As Espa and Duran note, there would be a 'clash with the chapeau requirements' of Article XX, pointing to the WTO jurisprudence in *Brazil – Retreated Tyres* and *European Communities – Measures Prohibiting the Importation and Marketing of Seal*, in that there would be an absence of a rational connection between the 'discriminatory element and climate change mitigation objectives'.[243] Similarly, under Article XX(g), Espa and Duran argue that renewable energy subsidies should 'meet without much difficult the first element of the test' since they are 'reasonably related' to the reduction of GHG emissions and thereby relate to the 'conservation of exhaustible natural resources'; however, they find an 'obvious limitation' in the fact that any measure justified under Article XX(g) would be 'made effective in conjunction with restrictions on domestic production or consumption' and find any satisfaction of this by public measures promoting renewable energy highly unlikely.[244] Finally, in practical terms, Espa and Duran argue that Article XX would only become hypothetically available for renewable energy subsidies that are 'directly challenged in the WTO dispute settlement system' and therefore Article XX would arguably have little impact in practice for sheltering support schemes since the main threat to green ambitions is not from WTO disputes but rather the 'proliferating unilateral trade remedy actions'.[245] This analysis shall be given more focus in due course.

This thesis finds the arguments against the applicability of the GATT Article XX to the ASCM, regardless of whether subsidies in question contain discriminatory components, more convincing and agree that its invocation presents difficulty. Not only would the textual barriers represent a troublesome hurdle to overcome but, even so, there is no guarantee that Article XX, if available as a potential defence, would be satisfied by challenged renewable support measures. As Marceau and Trachtman state, it would require a 'heroic approach to

[242] Espa and Duran 2018, p. 645 – 646.

[243] Ibid., p. 646.

[244] Ibid., p. 645.

[245] Ibid., p. 547.

interpretation' to extend the application of Article XX to justify subsidies found inconsistent with the ASCM.[246] Even allowing for the bolder approach in the WTO jurisprudence in *China – Publications and Audiovisual Products*, and accounting for the current dead-lock of the Appellate Body, it could be hypothesised that waiting for both this approach to reach the DSB, as well as the jurisprudential will to apply it, is playing with time that governments searching for legal certainty in applying green subsidies do not have. However, it is interesting to note Farah and Cima's commentary on the context from which the ASCM was born; unlike the GATT, it was negotiated in a time when the 'world was moving towards privatisation and free markets' which might explain the lack of any analogous exception clause, and regulators did not design the subsidy disciplines with renewable subsidies.[247] This is supported by Raslan, who recognises a lacuna in both the GATT and ASCM to deal specifically with the energy sector, which at their inception, had yet to see the 'current wave of liberalisation of the electricity markets' which has influenced renewable energy disputes.[248] Yet, there was one explicit carve-out to permit non-actionable subsidies: the now-expired Article 8.

5.3.3 The Return of Article 8

Moving to a discussion of Article 8, it is interesting to note that the (since lapsed) Article 8 further supports the argument that Article XX is not intended to be applicable to the ASCM. Indeed, Rubini argues that Article 8, which was designed exclusively for the ASCM to provide exceptions to the subsidy disciplines in the form of a non-actionable category of limited subsidies, could be interpreted as a sign of the 'inadequacy and eventual inapplicability of GATT Article XX'.[249] One could certainly see the initial inclusion of Article 8, analogous to Article XX but deliberately crafted for the ASCM, demonstrates the intention of negotiators and WTO Members to not bring the ASCM under the umbrella of Article XX exceptions. Originally, the architects of the ASCM did make provision for a category of non-actionable subsidies, however, it was deliberately given a provisional period of 5 years of applicability to reflect a compromise between WTO Members on the issue and it automatically expired at the end of 1999 due to a lack of consensus to renew it. By classifying certain types of subsidies into a legal category of non-actionable subsidies referred to as green light subsidies, Article 8 created one category which provided that subsidies would be non-actionable where they

[246] Marceau and Trachtman 2002, p. 874.

[247] Farah and Cima 2015, Time for Reform Toward Sustainable Development, p. 533.

[248] Raslan 2018, p. 928.

[249] Rubini 2011, p. 35.

constituted ‘assistance to promote adaptation of existing facilities to new environmental requirements imposed by law and/or regulations which result in greater constraints and financial burden on firms’ and there were subject to certain constraints such as being a ‘one-time non-recurring measure’ and were ‘limited to 20% of the cost of adaptation’.[250] Additionally, Article 8.3 requires subsidy programmes believed to fall within one of non-actionable categories by the implementing WTO Member to notify the ASCM Committee in advance of its implementation since invocation of the safe harbour was contingent on notification and determination by the ASCM Committee as to whether it qualified.[251]

Whilst short-lived, Charnovitz finds that Article 8 was important because it ‘delineated WTO-permitted policy space for certain subsidies’ enabling them from being ‘notionally shielded from being declared illegal’ or found countervailable; thus, this carve-out serves as evidence of a ‘one-time recognition by governments that subsidy policy space’ could provide ‘long-term solutions’ to social problems like environmental protection.[252] Indeed, this thesis finds the appeal of Article 8 particularly strong because it was tailored to the subsidy policy space, unlike the more general applicability of Article XX, and appeared to recognise the rationale behind certain subsidies, which is notably absent from the current framework. Furthermore, as Asmelash notes, linking back to the discussion of brown subsidies about, the likelihood of challenges against green subsidies is ‘further enhanced by the lack of express exemption for environmental subsidies’ following the expiry of Article 8 non-actionable category.[253] Therefore, by taking into account the purpose of the subsidy, Article 8 was highly valuable in protecting subsidies with environmental objectives which, had it not been terminated, would likely have created a significant shelter for them, placing them on more equal footing with their unchallenged brown counterparts. Nonetheless, the power of Article 8 should not be exaggerated, since it was certainly no umbrella to *all* types of green subsidies, as evidenced by the list of constraints on the assistance. Thus, although it created a small-carve out for some green subsidies as non-actionable, it remains a partial solution and should not be heralded as a panacea to the dilemma of accommodating renewable energy subsidies under ASCM subsidy disciplines. Returning to Charnovitz’s tripartite topography, he comments that, had Article 8 remained in force, some of the carve-out ‘might be mint space’ (essentially, non-actionable

[250] Art. 8.2(c)(i)-(ii), Agreement on Subsidies and Countervailing Measures.

[251] Art. 8.3, Agreement on Subsidies and Countervailing Measures.

[252] Charnovitz 2014, p. 10.

[253] Asmelash 2015, p. 280.

subsidies with legal shelter from multilateral or unilateral remedies) but since it has expired, they are 'all grey space contingent on economic effects', thereby legally ambiguous since, absent of discriminatory components, adverse effects would have to be demonstrated in a dispute.[254] Therefore, reinstating Article 8 might have the effect of bringing a limited type of green subsidies out of the remit of challenge.

However, Shadikhodjaev is more sceptical. He points to the historic fact that not a single subsidy was ever notified under Article 8 on account of the 'burdensome procedures' coupled with 'fear of potential WTO consistency review and legal challenges'; since the 'safe harbour under Article 8 provisions was never utilised', reviving Article 8 in its original form would 'barely help' in creating shelter for green subsidies.[255] This is supported by Espa and Duran who remark that the 'burdensomeness of the notification requirements attached to the granting of exemptions' within Article 8 acted as a disincentive for Members to utilise the provision.[256] However, this thesis would respectfully disagree with part of this position, since it does not take into account the changing international landscape, with renewable energy development becoming more competitive, trade frictions emerging therein and the increase in cross-border trade of electricity through interconnected grids, which perhaps were not as strong factors in 1999 when the Article expired. Indeed, disputes arising from renewable energy subsidies are a somewhat recent phenomenon and therefore there was less need of Article 8 to provide as a defence to multilateral proceedings in the environmental arena. Additionally, as will be explored below, Article 8 should not be considered sacrosanct in its form and a reinstatement could include mild reform to the notification requirements and, given the widespread current use of green subsidies, there would be greater impetus to make recourse to the exceptions.

However, touching upon Shadikhodjaev's comment of its 'original form' has signficant merit. Perhaps 'greening' the ASCM would be more effective if Article 8 was reinstated to some degree, but contained updated provisions on environmental subsidies, to better reflect and tailor the protection to the modern context. Indeed, Espa and Duran note that, due to the 'narrowly defined eligibility criteria' only a negligible portion of State practice within the renewable energy sector would be covered.[257] However, one could argue that Article 8 could be reinstated and reconceptualised more broadly. For example, Charnovitz proposed tweaking a revived

[254] Charnovitz 2014, p. 32.

[255] Shadikhodjav 2015, p. 494.

[256] Espa and Duran 2018, p. 648.

[257] Ibid.

Article 8 to prepare an illustrative list of subsidies helpful to the environment, suggesting a collaboration of this task with the Organisation for Economic Cooperation and Development (OECD.[258] This is supported by Cosbey and Mavroidis, who suggest that, since trade law needs to adopt a 'more nuanced manner' of tackling subsidies and acknowledge the role played by rationale in determining how subsidies are treated, a new 'expanded' Article 8 would be more efficient; it could build upon the existing (albeit terminated) provisions, the statutory caps and formulation of which and they found 'too narrow in scope' to fully address renewable energy subsidies in the 21st Century, and expand its shelter by widening the type and characteristics of support measures offered defence. [259] Indeed, this issue is highlighted by Nelson and Puccio, who analyse Article 8(2)(c) which imposed some constraints on the covered green light subsidies, including requesting a limit to '20% of the cost of adaptation'; on this basis, they similarly argue that reactivating Article 8 would require consideration by WTO Members on whether to expand the provisions in order to 'apply it efficiently to green subsidies'.[260]

Shadikhodjaev proposes that the WTO could negotiate an 'interim but extendable renewables-specific 'due restraint clause' to prevent challenges through the unilateral and multilateral track. However, he acknowledges that Article 8 was not renewed or extended due to 'persistent disagreement among Members'.[261] Thus, surely the negotiation of any new interim clause to prevent anti-subsidy challenge could fall prey to the same obstacle. This is similarly appreciated by Cosbey and Mavroidis who positively note that negotiators might find it easier to reinstate Article 8 rather than negotiating a new provision from the start; indeed, they point to the discussion before the ASCM Committee to demonstrate a lack of 'unanimity to eliminate Article 8' and that it would be reasonable to presume that some voices in favour of the reinstatement of Article 8 remain to be found amongst the WTO Membership.[262] Therefore, it might be more amenable to WTO Members, rather than starting anew to negotiate reform.

Certainly, in light of the previous conclusion of the improbable practical application of Article XX to renewable subsidies, it is clear that the balance between environmental objectives and trade concerns within the subsidy arena is disturbed. Therefore, the revisiting of Article 8 could potentially be one of the most effective and politically feasible avenues for reform to the subsidy

[258] Charnovitz 2014, p. 37.

[259] Cosbey and Mavroidis 2014, p. 45.

[260] Nelson and Puccio 2021, p. 504.

[261] Shadikhodjaev 2015, p. 495.

[262] Cosbey and Mavroidis 2014, p. 42.

disciplines, to enable differential treatment of subsidies and take into account public policy values and rationales underpinning them, thereby carving-out a shelter for renewable energy subsidies to some extent. As Charnovitz aptly states, one should not start from the premise the WTO law is immutable.[263] However, neither should one underestimate the challenges in finding consensus to back reform, particularly on an issue as prickly as subsidies, and the slow pace taken in reforming other areas of the WTO. Particularly for Sweden and Finland, for whom it has been ascertained that it is highly unlikely to be found that they employ prohibited subsidies, a reform to the ASCM reinstating Article 8 with such aforementioned amendments would be particularly valuable. The argument for the applicability of Article XX GATT, for which a multilateral dispute would first have to arise in order to utilise it as a defence, is less pertinent for the Swedish and Finnish circumstances since the multilateral route has historically been taken to challenge prohibited subsidies, of which these two countries are devoid. However, Article 8, by providing a more prescriptive category of non-actionable subsidies, would significantly remove a threat, albeit uncertain to begin with, of complaints that actionable subsidies are utilised and that adverse effects can be demonstrated. More broadly, Article 8 would provide Sweden, Finland and WTO Members as a whole more clarity on which subsidies might be deemed justified on the basis of their policy aims, enabling them to pursue ambitious green industrial policy with more certainty, and more generally would re-pivot the balance between environmental protection and trade interests.

5.3.4 Multilateral versus Unilateral: CVDs

However, whilst the prospect of potential challenge is an obstacle to more ambitious green policy, the multilateral challenge route of the ASCM should not be overemphasised. Indeed, as Shadikhodjaev notes, of the 102 dispute cases claimed under the ASCM, only 6 concerned renewable energy subsidies; in looking at WTO litigation trends and trade conflicts with green subsidies, it is important to acknowledge the wave of challenges through CVD investigations, that is, through the unilateral track.[264] Furthermore, Espa and Duran argue that the limitations of Article XX and Article 8 lie in the fact that these potential avenues would provide 'no legal shelter' for the types of climate-friendly renewable energy subsidies that have, in practice, actually been 'at a higher risk under current WTO rules', namely through the unilateral remedial action, and therefore would only present a fragmented solution to 'greater supportiveness

[263] Charnovitz 2014, p. 34.

[264] Shadikhodjaev 2015, p. 484.

between international trade and climate change regimes'.[265] Interestingly, it is the EU, alongside the United States, who is the biggest culprit in resorting to the countervailing mechanism in the face of allegedly trade-distortive measures. This is illuminated upon by Espa who references the 45 trade remedy investigations (of which 19 were CVDs and 28 were Anti-Dumping duties, often forming parallel investigations) initiated in the renewable energy sector between 2006 and 2015, of which the EU was responsible for initiating 14.[266]

Therefore, it is arguable that the use of the unilateral track has a significant eroding impact on green subsidy policy space. Some academics find that it is unilateral remedial action that has actually been 'the main source of constraint on government support to green electricity'.[267] Indeed, Espa finds that there has been an abuse of WTO trade remedy laws, since 'excessively high tariffs de facto' distort the playing field in favour of domestic industries instead of levelling it, consequentially having a detrimental effect on the accessibility of renewable energy technologies due to price increases, corroding competitivity of clean electricity with fossil fuels and ultimately undermining the 'supply chain optimisation'.[268] From this analysis, it is clear that CVDs play a pivotal role in crippling green subsidies. Additionally, it important to note that this abuse arises from the fact that, unlike the multilateral track, the imposition of trade remedies, outlined in Article 19, is made on the basis of a 'final determination' made by a WTO Member and the decision of both whether and to which amount the countervailing duty shall be imposed (which can be the full amount of the offending subsidy, or less) is made 'by authorities of the importing Member'.[269] As a result of this discretion, there is an observable trend that subsidies with discriminatory components are challenged multilaterally, in contrast to actionable subsidies with 'adverse effects' have CVDs imposed upon them. Espa astutely attributes this to the fact that the domestic administrative authorities in charge of CVD investigations 'enjoy a wide margin of discretion' in conduction of their CVD determinations and therefore they inevitably privilege the interests of their national industries, often disproportionately to the effect of the offending subsidy.[270]

[265] Espa and Duran 2018, p. 621.

[266] Ibid., p. 631.

[267] Ibid., p. 632.

[268] Espa 2019, p. 988.

[269] Art. 19, Agreement on Subsidies and Countervailing Duties.

[270] Espa 2019, p. 987.

Thus, one must conclude that trade remedy law itself must face some form of reform too. Certainly, Article 19 of the ASCM seems to implicitly recognise the detrimental effect that CVDs may have upon subsidies, but this recognition is too limited to have any signficant effect in sheltering renewable energy support measures from abuse of the mechanism. Charnovitz comments that it is the 'only way' in which the ASCM confronts the 'counterproductive nature' of CVDs, by urging (not obligating) Members to 'adopt procedures in which domestic authorities can take into account representations' from domestic parties, which shall be explored in greater depth below.[271] Shadikhodjaev suggests that there is room for the 'softening' of certain elements of the countervailing mechanism and posits that an agreement could potentially be reached by WTO Member to 'green the current requirements for termination of investigations' in regards to de minimis subsidies and negligible imports, for example by increasing the 'numeric thresholds for import of renewable energy and associated equipment'; additionally, he argues that actual application of Article 19.2 of the ASCM would 'certainly relax the countervailing mechanism'.[272] Article 19.2 refers to that it would be 'desirable' that procedures be established to enable the domestic authorities of the importing Member concerned to 'take due account of representations made by domestic interested parties' who interests might potentially be 'adversely affected' by the CVD imposition.[273]

This thesis is keen to acknowledge the role of more open dialogue within the WTO arena on the subject of subsidies, particularly unpicking the complexity of the rationales underpinning them and the positive externalities that reverberate through economies as a result. Thus, by removing optionality of this and making it obligatory to conduct such procedural measures per Article 19.2, opening up a forum for the exchange of ideas would perhaps relax the imposition of detrimental CVDs. Charnovitz advocates that Article 19.2 be amended to require governments to 'invite comments from environmental and consumer groups' where a CVD is sought against a green subsidy.[274] This idea has significant merit, particularly since, as noted in regards to brown subsidies, environmental advocates have been comparatively silenced in multilateral proceedings in particular, and therefore adding a communication dimension to the imposition and collection of CVDs could lead to less burdensome duties relating to renewable subsidies. Additionally, Article 19.2 states that it is 'desirable that the imposition [of a CVD]

[271] Charnovitz 2014, p. 19.

[272] Shadikhodjaev 2015, p. 497-498.

[273] Art. 19, Agreement on Subsidies and Countervailing Measures.

[274] Charnovitz 2014, p. 41.

should be permissive in the territory of all Members' and that the CVD should be less than the 'total amount of the subsidy if such a lesser duty would be adequate to remove the injury to the domestic interest'.[275] Perhaps making these more stringent than simply 'desirable' would help in preventing abuse of the CVD mechanism and would be less contingent upon the political will of domestic 'injured' states to not abuse their margin of discretion in the investigation and to refrain from disproportionate imposition of CVDs in retaliation. However, this thesis would not seek to suggest doing away with the unilateral track entirely. To extend an analysis of Charnovitz's commentary, he also observes that this would actually make it 'politically harder' for Member to 'create new mint space [here, he refers to legally non-actionable policy space] for green subsidies' as well as violating the 'mercantilist assumptions underlying the WTO'.[276]

Yet, the aforementioned propositions for simply softening the CVD mechanism are compelling. Charnovitz advocates that the WTO should 'improve the choice architecture of governments in adjudicating an applicant's eligibility for a CVD'; amongst his proposal for Article 19.2 amendment, he suggests that the ASCM more generally should 'nudge' Members to take into consideration the 'domestic consumer and environmental interests' as well as arguing that it would be beneficial if companies were 'ineligible to seek a CVD for a specific product' were they to be simultaneously enjoying a direct domestic subsidy for the same product.[277] In terms of equity, these suggestions are appealing, as well as being rather palatable and politically feasible since all countries employ subsidies, and therefore employ them at the risk of incurring CVDs on the basis of perceived adverse effects. Reforming the CVD mechanism in this manner would not represent too radical a reform to prevent a WTO consensus and would create a safer harbour for more green subsidies seen as 'actionable' which would be widely advantageous. It would certainly go a long way to stagnating the 'potentially huge tit-for-tat escalation efforts' by Members in the use of unilateral trade remedies and unreasonable protectionism at the expense of 'gross environmental costs'.[278] Particularly given the EU's signficant use of CVDs, this reform would be highly beneficial in offering greater shelter to Sweden and Finland who might be at risk of becoming collateral in such tit-for-tat escalations and whose industries would suffer from the imposition of abusive CVDs.

[275] Art. 19, Agreement on Subsidies and Countervailing Measures.

[276] Charnovitz 2014, p. 41.

[277] Ibid.

[278] Espa 2019, p. 995.

Chapter 6: Concluding Remarks

6.1 Conflict, Cohesion and Compatibility

This thesis firstly sought to demonstrate that both Sweden and Finland have high ambitions in the green arena, with progressive targets for net-carbon neutrality and a clear intention to take the lead in a green transition to 100% renewable energy both globally and within the EU. In exploring the green support measures in place in both countries, it is clear that a key component of green industrial policy is the use of green subsidies, left to the discretion of Sweden and Finland as EU Member States to support these renewable energy targets.

Through the examination of these support measures against the WTO subsidy disciplines, it has illuminated the complex web of legal, economic, and socio-political factors that interplay with one another behind challenges and complaints of green subsidies and their influence on WTO Members opting for the multilateral or unilateral track in counteracting the adverse economic effects, perceived or otherwise, from offensive subsidies. Initially, it might appear that Sweden and Finland are not significantly impeded by the framework of the WTO. Certainly, in the absence of any blatant use of LCRs, both countries would most likely, following the precedence of former disputes before the DSB, find freedom from any multilateral action. In general, this thesis would conclude that the impact of the WTO subsidy framework is not so extensive so as to pose a severe obstacle to the green energy transition in either of these countries. However, as the legal analysis demonstrated, the route to determining the existence of a subsidy, particularly of a green nature, is still unclear and many points have yet to be clarified by interpretation by the Appellate Body. In this regard, this thesis ultimately finds that Sweden and Finland would nonetheless benefit from greater legal clarity in the WTO subsidy disciplines in forging their way forward to 100% renewable energy generation through support schemes in the clean energy sector. Furthermore, the EU itself has been one of the main proponents of the unilateral trade in imposing countervailing duties on the basis of adverse effects from support measures, and thus Sweden and Finland might in turn find themselves susceptible to such retaliation from other Members of the WTO, particularly in relation to the Finnish energy investment aid, which warrants caution.

Nonetheless, the CEEAG has demonstrated that, within the EU, the intentional shift from direct subsidies to more market-based mechanisms fostering competition rather than reliance on government intervention has already been initiated. The effects of this policy direction can already be seen to reverberate in the actions of Sweden and Finland, through the imminent lapse

of the direct capital solar subsidy in Sweden and the shift to a tender-based premium scheme in Finland, in favour of the formally globally popular FIT scheme. Yet, if even countries such as Sweden and Finland, with such well-established renewable energy industries, who have shifted to market-based measures, find uncertainty in the path of the WTO, these fears will only be expounded for developing countries whose clean energy sectors are undeveloped and in need of more signficant direct government intervention and capital allocation through subsidies. Perhaps, in the arena of the WTO, Sweden and Finland could be seen as role models in this regard; have already employed potentially actionable or WTO non-compliant subsides in the past but moving towards market-based instruments, they provide a roadmap to other states with less developed renewable energy industries to essentially leapfrog past more direct capital subsidies to competitive market-based instruments of support.

6.2 What, now, for the WTO?

Ultimately, in the view of this thesis, it would be an exaggeration to assert that the WTO is fundamentally incompatible with climate change mitigation goals in regards to the role played by green subsidies. The preamble of the Marrakesh Agreement Establishing the World Trade Organisation (WTO Agreement) references the objective of sustainable development, which enshrines environmental protection in conjunction to trade interests from the conception of the WTO, and Article XX GATT, as shown, has indicated a deliberate recognition of the pivotal role of climate change mitigation and environmental protection in the balance of economic concerns.[279] This demonstrates a general acknowledgement by the WTO framework as well as the Appellate Body interpreting its disciplines that international trade cannot operate unconstrained and must be balanced by environmental considerations. However, the lapse of Article 8 and the seeming inapplicability of Article XX to the ASCM has disturbed this balance. As Stern states, climate change may be the 'greatest and widest-ranging market failure ever seen'.[280] Surely in light of this, the course must be corrected to better enable subsidies intended to support renewable energy to correct this market failure in turn.

Ideally speaking, there should be a recognition of the rationale behind the use of a subsidy, particularly given the exploration between the disparity between the practical treatment of green and brown subsidies. This thesis would posit that the most feasible and efficient manner in

[279] Preamble, Marrakesh Agreement Establishing the World Trade Organization, Apr. 15, 1994, 1867 U.N.T.S. 154, 33 I.L.M. 1144 (1994).

[280] Stern 2007, executive summary, i.

which certain subsidies could find justification within the ASCM would be through the reinstatement of Article 8, but with certain amendments. By reviving Article 8, the ASCM would provide more prescriptive and concrete delineations of certain subsidies as well as normatively acknowledging, within the framework of the ASCM, the validity of rationales and public policy values underpinning subsidies. This seems to be the most potent and politically expedient route to offering shelter to green subsidies since the groundwork for Article 8 has already been laid through the previous negotiations, with language that was deemed acceptable for its temporary presence and palatable to less enthusiastic WTO Members. As Farah and Cima acknowledge, the revival of a non-actionable category of subsidies would have its passage eased by the fact that Article 8 provides a 'pre-negotiated environmental text'.[281] Additionally, the international context has changed since its conception; the climate crisis is at the forefront of the global agenda which could serve to motivate inter-WTO negotiations to build upon these pre-existing foundations and utilise Article 8 as a template for a non-actionable category. It would perhaps ease the passage to adding amendments to the revival of Article 8, as discussed, to include a more illustrative list of non-actionable subsidies and to widen its scope to be better tailored to green measures suited to the 2022 economic context and renewable energy industries. By expressing and acknowledging the rationale of green subsidies in normative terms, the clean energy sector, and governments intervening therein through renewable energy subsidies, can be provided greater shelter from potential challenge.

In addition to providing a category of non-actionable subsidies, it is clear from the preceding analysis that the abuse of the unilateral trade remedy route requires attention. Whilst the imposition of CVDs should be retained in order to mitigate the distortive impact that subsidies, green or otherwise, elicit, the amendments to Article 19 discussed in Chapter 5 should be considered. Indeed, opening up a greater forum for dialogue between WTO Members *ex ante* to the imposition of trade remedies, as well as enabling domestic industries and environmental groups to position themselves within the discourse, would be a signficant step in creating greater supportiveness between climate change considerations and trade interests. Furthermore, it would prevent CVD retaliation amongst WTO Members, which serves only to create a collective action dilemma and a mutually damaging interchange of trade remedy imposition.

Nonetheless, whilst this thesis hopes that, given the severity of the climate crisis, there could be sufficient impetus from WTO Members to push for reform, one cannot ignore that any

[281] Farah and Cima 2015, Time for Reform Toward Sustainable Development, p. 536.

reform would require the consensus of its Members and it seems impossible to divorce suggestions of reform from socio-political realities. Indeed, the current deadlock of the Appellate Body appointments might indicate that the spirit of international cooperation and community is a current state of disarray. To look at Rubini's contribution, he aptly acknowledges that the 'conditions for new hard, binding law on subsidies do not seem present'.[282] Perhaps in order to foster any expectation of meaningful deliberations on reform, the road to Article 8 negotiations and amendments to CVDs must be more easily paved. As Rubini suggests, the terms of debate could be clarified and, to 'kick-in the process for reform', the WTO Members should make use of the built-in mechanisms of the ASCM and wider WTO Framework, such as the Group of Experts or the Trade Policy Review Mechanism, or to create bodies subsidiary to the Committee on Subsidies and Countervailing Measures; this would create the foundations for 'discussions to be meaningful and advance knowledge and understanding'.[283] Additionally, to revisit the concurrent paradigm of EU State Aid, Duran notes that the 'most valuable' lesson to draw from the EU regulatory experience would be the 'imperative of improving the transparency and knowledge-enhancing side' of the WTO subsidy control system.[284] Thus, to preface the aforementioned fundamental and substantive reform to the ASCM, this thesis suggests that improving the system of notification would hence ameliorate inter-WTO dialogue surrounding subsidies and clarify the boundaries of green policy space *ex ante* for governments seeking to employ subsidies. This would subvert the current paradigm of trade-environment conflict through the imposition of CVDs and the use of multilateral challenges, perhaps easing the tension between states wishing to protect their trade interests and those attempting to facilitate a green transition. Furthermore, by promoting dialogue and notification, it may have the positive effect of improving the use of green subsidies; through knowledge sharing, more economically developed countries such as Sweden and Finland could demonstrate the most cost-effective and economically efficient measures to adopt in order to promote renewable energy development. By facilitating this process-based reform, this thesis argues that the pinnacle of Article 8 reinstatement and CVD reform will be more easily reached, providing the clarity and shelter for the clean energy sector, and the renewable energy subsidies underpinning it, thereby enabling Sweden, Finland and beyond, the policy space necessary to reach their green transitions.

[282] Rubini 2015, p. 14.

[283] Ibid.

[284] Duran 2018, p. 129-131.

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