Trade and Sustainable Energy Series



Feed-in Tariffs for Renewable Energy and WTO Subsidy Rules:

An Initial Legal Review

By Marie Wilke,
International Centre for Trade and Sustainable Development

ICTSD Global Platform on Climate Change, Trade and Sustainable Energy

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and Sustainable Development

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ICTSD welcomes feedback and comments on this document. These can be forwarded to mwilke@ictsd.ch

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LIST OF ABBREVIATIONS AND ACRONYMS

DECC	Department of Energy and Climate Change
DSU	Dispute Settlement Understanding
ECJ	European Court of Justice
EU	European Union
FIT	Feed-in Tariff
GAM	Global Adjustment Mechanism
GATT	General Agreement on Tariffs and Trade
GEA	Green Energy Act
HOEP	Hourly Ontario Energy Price
HS	Harmonized System
OECD	Organization for Economic Cooperation and Development
Ofgem	Office of Gas and Electricity Markets
OPA	Ontario Power Authority
PV	Photo voltaic
SCMA	Subsidies and Countervailing Measures Agreement
SOE	State-owned enterprise
SPS	Sanitary and Phytosanitary Measures
TRIMS	Trade-Related Investment Measures
WTO	World Trade Organization

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FOREWORD

Addressing climate change will require a global shift in energy supply and use, with a reduced dependence of fossil fuels giving way to an increasing share of clean air energy. In order for this to be achieved, policies need to make sure that costs for carbon emissions relating to fossil fuels are being adequately internalized. In addition, governments may choose to adopt different kinds of support policies directed at sustainable energy generation. To date, some eighty countries, half of which are developing, have adopted measures to support renewable energy production. The most common tool is the feed-in tariff (FIT).

Under a feed-in tariff programme, eligible renewable energy producers, including homeowners and businesses, are paid a premium for their green energy generation, which usually exceeds the market price. Around seventy-five of such FIT programmes are currently being implemented on federal or sub-federal level around the world including in almost twenty developing countries.

Until recently, trade (law) experts have largely refrained from discussing the relationship of FITs, global trade flows and the multilateral trading system.

Not until a dispute was lodged with the WTO's Dispute Settlement Body (DSB) in September 2010 did the issue enter the halls of the WTO. In that particular case, it is a controversial domestic content requirement and not the FIT as such that landed the disputing parties at the WTO, but the case also introduces broader questions. In particular the decision to file the dispute under the WTO's subsidy accord has attracted great attention.

Meanwhile in March 2011, the WTO's Appellate Body for the first time ruled on the term 'public body' which forms a centre piece of the WTO's Subsidies and Countervailing Measures (SCM) Agreement. The decision 'overruled' previous notions developed by a series of WTO panels and as such introduced a new element to the subsidy discussion.

By comparing the FIT currently under scrutiny at the WTO – the Ontario FIT mechanism – with two other systems – the UK and the German FIT – that differ fundamentally in their design and implementation, this paper points to some of the most critical questions raised in relation to current WTO rules. In so doing, the paper clearly outlines the different steps that WTO subsidy law stipulates. Likewise, it points to other important WTO agreements and their interaction with the subsidy rules, including the famous 'exception clause' in GATT Article XX. In that respect, the paper introduces various legal arguments and interpretations brought forward by experts and policy makers.

The paper concludes with a summary of the most critical controversies raised by the SCM Agreement in relation to feed-in tariffs - all of which point to the question of whether distinctions currently or potentially made by applicable WTO law are efficient or desirable from a trade and climate policy perspective. The paper does not attempt to answer that question – instead it aims to highlight various challenges posed and solutions offered by WTO law. The aim is to inform ongoing discussion on whether existing rules and policies are supportive of sustainable development goals and what future actions would be desirable. The dispute at the WTO is likely to be only the starting point of a much broader discussion.

We hope that you will find this study a useful contribution to the ongoing debate.

Ricardo Meléndez-Ortiz
Chief Executive, ICTSD

EXECUTIVE SUMMARY

This paper analyzes renewable energy feed-in tariff (FIT) programmes in the context of WTO subsidy law. Using the Ontario, UK and German FIT mechanisms for renewable energy as examples, the paper explores important questions of subsidy law to determine how current rules may treat FIT programmes in an effort to inform the debate on this matter.

A feed-in tariff is a policy tool defined by three key characteristics: guaranteed electricity purchase prices, guaranteed grid access and long-term contracts. Increasingly these tools, or programmes, are designed in a way to encourage the adoption of renewable energy sources. In these cases, eligible renewable energy producers (including homeowners and businesses) are generally paid a premium for any renewable energy they produce. Moreover, electric grid utilities are obliged to purchase the electricity, ensuring a return on the renewable energy producers' investments. In other words, a FIT programme is a purchasing guarantee.

However, government support for clean air energy production, may be in conflict with World Trade Organization (WTO) rules, if it involves subsidies that can disadvantage foreign manufacturing and distort competition. With a recently launched case over the Canadian province of Ontario's FIT system, the issue has now entered the sphere of WTO dispute settlement.

This study does not intend to make any recommendations about whether WTO rules should limit governmental policies implemented with the aim to increase the generation of renewable energy. Rather, it aims at reviewing the current legal situation in order to inform policy discussion.

The case was initiated by Japan on 13 September 2010 with the EU and US joining the consultations soon after. In July 2011 the Dispute Settlement Body (DSB) established a panel to hear the case. It is not the FIT programme as such, but rather a controversial 'local content' provision of Ontario's FIT programme that landed Canada at the WTO. The 'made-in-Ontario' requirement mandates that up to sixty percent of all green energy product inputs (goods and services) be manufactured or provided in the province. Japan argues that conditioning FIT support on local input requirements discriminates against renewable energy equipment manufacturing outside Ontario and amounts to a prohibited subsidy under the WTO subsidy agreement.

The main question this paper addresses is whether WTO rules, specifically the WTO Agreement on Subsidies and Countervailing Measures (SCM Agreement), prohibit FIT programmes as illegal subsidies and if so, on which grounds. WTO subsidy law contains clearly defined criteria for what constitutes a) a subsidy and b) when such subsidies are illegal. It should be noted, however, that despite these clear criteria, there is no generic answer to the question of whether FIT programmes 'are a subsidy'. Rather, the legal assessment depends on the actual design and implementation of a FIT programme and its effects at a given point. In that regard, the paper raises the most relevant aspects of the debate on the basis of three different examples. It commences by assessing the definition of a subsidy according to Article 1 SCM Agreement.

According to Article 1 of the SCM Agreement, a subsidy is deemed to exist if there is a 'financial contribution by a government or any public body' whereby 'a benefit is conferred'. Article 1 then goes on to delineate what constitutes a 'financial contribution', including (i) 'direct transfer of funds', (ii) a situation in which 'government revenue that is otherwise due is forgone or not collected' and (iii) 'when a government provides goods or services [...] or purchases goods'. In addition, to prevent the circumvention of subsidy rules by governments directing private bodies to run the programme, the SCM Agreement includes alternative (iv). It states that if the government directs or entrusts a private body to implement a programme that involves 'a practice normally followed by the government', it will be considered a subsidy nonetheless.

FIT programmes could potentially qualify as a financial contribution in the form of alternative (iii) 'a governmental purchase of goods or provision of services' because, FIT programmes essentially are a purchasing guarantee for electricity, linked to a guarantee of transmission. There are three scenarios under which a FIT programme could be a 'governmental purchase or provision of services'. Under the first, a public body could use public funds to execute the FIT programme itself. Under the second, a government could direct a private body to execute the programme but provide the necessary funding. Under the third, a government could direct a private body to execute the FIT programme and pay for it through a relocation of costs or other means. This takes us to the most important questions raised by the SCM Agreement: when is a body private or public and what difference does that make?

The distinction between public and private is critical for the present discussion, as each country implements its FIT programmes differently. In many nations the electricity sector remains state owned or state regulated with state-owned enterprises, public price-setting bodies and other regulatory institutions playing a significant role. In other countries, a government may decide to compel electricity network operators to purchase green energy at a minimum price while reallocating the costs among electricity undertakings, network operators and consumers. This paper discusses various arguments and scenarios in this regard, informed by the three example FIT programmes. Importantly, each constellation is treated in a different way by WTO law. Moreover, recent case developments make the task of determining whether an entity is public or private quite difficult.

The recent Appellate Body ruling in *US-AD/CVD* has changed the criteria of what constitutes a 'public body'. Before this decision, previous WTO panels established that an entity is a public body if it is sufficiently controlled by a government (or other public bodies). In the recent ruling, however, the Appellate Body looked at more than just control; it demanded that the entity 'possesses, exercises, or is vested with governmental authority' in order to qualify as a public body. As the discussion in this paper shows on the basis of the Ontario example, identifying this 'governmental authority' can be quite challenging and depends on a country's legal systems and the design of its regulatory environment.

If an entity tasked with implementing the FIT programme is a private body instead, it could still be captured by the SCM Agreement through its alternative (iv), outlined above. This, however, is conditioned upon the entity engaging in a 'function normally vested in the government which does not differ from practices normally followed by governments'. What constitutes 'normal' in this context is a much disputed area of WTO subsidy law. The paper discusses the meaning of 'normal', informed by previous jurisprudence and expert findings and applies them to the three different scenarios outlined in the papers' first part. For the moment, experts seem to tend towards denying that the regulation of the electricity market, including the execution of feed-in tariff programmes for renewable energy is a 'normal governmental practice'. This argument is based on the notion that the interpretation of 'normal' needs to leave sufficient leverage for countries to engage in control-and-command regulation.

If a measure is indeed considered a subsidy, it does not yet mean that it is illegal. In fact, the SCM Agreement distinguishes between 'prohibited subsidies' and 'actionable subsidies'. Subsidies are 'prohibited' if they are contingent on export performance or on local content requirements. If a subsidy is found to be prohibited it must be removed immediately. In that regard, FIT programmes conditioned upon the use of domestic input, if found to be a subsidy within the meaning of the SCM Agreement, will most certainly be considered a 'prohibited' subsidy. Measures that do not contain such requirements can still be found illegal if the complaining party can show an 'adverse effect' of that programme – a difficult standard to meet in the context of energy markets. In addition, actionable subsidies must be specific – access to the subsidy is limited to a specific industry or group of industries – and, unlike prohibited subsidies, the violating country only needs to remove the adverse affects of the measure. The paper concludes that in many cases it would be highly difficult to prove an adverse effect on like products in foreign markets deriving from one particular FIT programme adopted to support renewable energy generation.

Finally, even if a FIT programme for renewable energy is found to violate WTO rules, either GATT (national treatment or most favoured nation) rules or SCM Agreement subsidy rules, it could still be allowed under Article XX GATT exceptions to the rules. Article XX GATT has played an important role in the regulation of environment-related trade measures. The provision acknowledges that certain measures, otherwise in violation of WTO provisions, can be justified if they are necessary to achieve selected public policy aims and are applied in a non-discriminatory manner. The most well-known exceptions refer to measures 'necessary to protect human, animal or plant or health' (para b) and measures 'relating to the conservation of exhaustible natural resources [...]' (para g). In addition, Article XX GATT provides that the measures may not be administered in a way that does constitute an arbitrary or unjustified discrimination or a disguised restriction on international trade.

This paper explores the two following questions in relation to GATT Article XX exceptions: 1) Can GATT Article XX be available as a defence (in abstract) for non-GATT claims, especially those based on the SCM Agreement? 2) Could a FIT measure, with or without the local content requirement, potentially be justified on the basis of GATT Article XX? Both issues are being debated with great enthusiasm by trade law experts and policy makers, often informed by policy beliefs rather than purely legal considerations. At the moment as the paper shows, there are different opinions as to whether 'local content requirements' can ever be seen as 'necessary to protect the environment' following the domestic capacity argument. Likewise, it is questionable whether there is only one answer to the question of whether FITs are 'effective' in limiting air pollution. The paper addresses the literature on these two issues and contributes to the discussion but refrains from providing an answer to this highly political and complex debate.

As mentioned above, there is no generic or definite answer to the questions raised in this paper. To the contrary, each analysis depends on the exact design, implementation and effect of the measure in question at a given point. In addition, WTO law is a constantly evolving body of rules. While we can discuss various options presented by WTO law experts, it is not possible to predict how the rules will be applied in a specific case. This has become all the more clear in the recent *US – AD/CVD* decision.

Against that background, the paper concludes that the most important outcome of the ruling could well be its impact on expert discussions. With the panel establishment, the issue has not only entered the stage of WTO dispute settlement, but also the stage of expert discussion. As this paper shows, the WTO agreements allow for various arguments and interpretations, which reflects the WTO's nature as a body focused on negotiated outcomes. It will be up to the WTO members to decide whether they find these options supportive of sustainable development and more specifically of climate change mitigation, or whether a renegotiation would be beneficial.

1 INTRODUCTION

The shift to a low-carbon economy will require massive investments from both the public and private sectors. The high initial costs required to develop green energy sources discourage many firms from moving into the renewable energy sector. As a consequence, governmental support is considered necessary to motivate investment in and production of clean energy products and services. In 2009, governments provided a total of approximately US$43-46 billion in support to renewable energy and biofuels projects and companies.[1] This figure includes the costs of, among other, renewable energy certificates, tax incentive programmes, cash grants, other *direct* subsidies and feed-in tariffs (FITs).

A feed-in tariff is a policy tool defined by three key characteristics: guaranteed electricity purchase prices, guaranteed grid access and long-term contracts. Increasingly these programmes are designed in a way to encourage the adoption of renewable energy sources. In these cases, eligible renewable energy producers (including home owners and businesses) are genereally paid a premium for any renewable energy they produce. Moreover, electric grid utilities are obligated to purchase the electricity, so renewable electricity producers are guaranteed a return on their investment. In other words, a FIT programme is a purchasing guarantee. Varying tariff rates are often set for different renewable energy technologies depending on the costs of developing those technologies. The cost-based prices therefore enable a diversity of projects (wind, solar, etc.) to be developed, by facilitation investment, as investors can obtain a reasonable return on their renewable energy investments and benefit from planning guarantees.[2]

However, government support for renewable energy may be in conlfict with World Trade Organization (WTO) rules, if it includes subsidies that have the potential to disadvantage foreign manufacturing and distort competition.[3] With a recently-launched case concerning the Canadian province of Ontario's FIT system, the issue has now entered the sphere of WTO dispute settlement.[4]

The case was initiated by Japan on 13 September 2010 with the EU and US joining the consultations soon after. In July 2011 the WTO Dispute Settlement Body (DSB) established a panel to hear the case. It is not the FIT programme as such, but a controversial 'local content' provision of Ontario's FIT that landed Canada at the WTO. The 'made-in-Ontario' requirement demands that up to sixty percent of all green energy project inputs (goods and services) be manufactured or provided for in the province.[5] Among its complaints, Japan argues that conditioning FIT support on the basis of local input requirements discriminates against equipment for renewable energy generation facilities produced outside of Ontario and amounts to a prohibited subsidy under the WTO subsidy agreement – the Agreement on Subsidies and Countervailing Measures (SCM Agreement).[6]

Ontario's provincial government launched the disputed programme in 2009, as part of a greater policy with the dual aims of eliminating coal-fired power generators and creating jobs. In fact, many countries face domestic opposition when attempting to implement green energy support programmes as consumers fear increased electricity costs. Selling 'green' as a stimulus measure is often seen as a means of reconciling consumer fears by creating jobs while increasing the share of renewable energy. It was this move that effectively eased much of the public opposition and allowed Ontario's government to implement the programme.

Seen in the light of these objectives, the programme has thus far been successful, as it has increased the share of renewable energy and drawn manufacturers to Ontario.[7] The largest deal under the province's green power plan is a US$6.7 billion green energy investment by a consortium led by South Korean Samsung

Group. The project to build four wind and solar power clusters in Ontario will have a combined power-generating capacity of 2.5 gigawatts by 2016. That is equivalent to 4 percent of Ontario's total electricity consumption.[8] Other equipment manufacturers, primarily based in Europe, the US and other parts of Canada, have already expressed their intention to move their business to Ontario to take advantage of the anticipated buying spree under the new green energy plan.[9]

Some observers have speculated that Japan is targeting Ontario in the wake of the South Korean deal and the fact that Japan and its companies – such as Sharp, Mitsubishi, and Kyocera – were on the losing end of a US$20 billion nuclear power deal in the United Arab Emirates. The Ontario deal could be perceived by Japan as a sign of it losing ground in the green energy arena, some experts have said. According to its request for consultations, the US joined the dispute because of its substantial trade interests in renewable energy as a major innovator in the field and as a primary source of Canadian imports. The US joins Japan in its condemnation of what it perceives as the trade distorting effects of the local content requirement.

While a challenge of a local content requirement under the General Agreement on Tariffs and Trade (GATT) or the Agreement on Trade-related Investment Measures (TRIMS) is no novelty, the claim under the SCM Agreement introduces a new element to the discussion – whether FIT programmes can generally amount to a subsidy. This question will be the focus of the present paper. It will discuss the different FIT implementation methods and potential legal ramifications. The Ontario FIT mechanism will serve as the main example, together with the FIT systems implemented by Germany and the UK. However, it is not the author's aim to legally evaluate Ontario's FIT measure, or any other FIT programme, or to provide a definite answer. The aim is to highlight the most controversial legal aspects of the case in order to inform future policy debates, while refraining from final judgment.

The paper will approach the discussion by first providing an overview of the different FIT programme designs, analyzing the entities and functions involved in Ontario's FIT and briefly comparing them to the UK and German FIT programmes. The second part of the paper will outline the most controversial aspects of the WTO's subsidy agreement and present potential legal arguments and challenges. Specifically, the second part will outline the SCM Agreement's structure, and then analyze the definitions of a 'public body' vs a 'private body' and 'practices normally performed by governments'. The paper concludes with a short discussion of potential legal justifications under Article XX GATT in case FIT measures were found to constitute an illegal subsidy.

2 A COMPARISON OF FIT PROGRAMMES

While all FIT systems usually follow the same underlying idea, their implementation and design can differ substantially. In many nations the electricity sector remains state owned or state regulated with state-owned enterprises (SOEs), public price-setting bodies and other regulatory institutions playing a significant role. In these countries FIT systems are often a public matter. In other countries a government might decide to obligate electricity network operators to purchase green energy at a minimum price. This has the potential of limiting the government's role to that of a legislator. The exact design and implementation of FIT programmes substantially influences any legal analysis.

Generally speaking, there are three scenarios: first, a public body could use public funds to execute the FIT programme. Second, a government could direct a private body to execute the programme, but provide the necessary funds itself. And third, a government could direct a private body to execute and pay for the programme by generating resources through a reallocation of costs or other means. While the first two scenarios represent clear instances of government action, the third appears private in nature.

Understanding these differences is important as WTO law may treat the approaches diffe-rently. A discussion of three selected FIT systems, providing three different examples, will thus follow. The Ontario FIT programme provides an interesting example as it points to the great difficulties one faces when attempting to determine whether certain actors are 'public' or 'private' agents within the meaning of WTO subsidy law. On the other hand, the German FIT system, the only FIT scheme that was ever subject to court proceedings (European Court of Justice (ECJ), *PreussenElektra AG v. Schleswag AG*),[10] is an example of FIT programmes implemented through a purchase obligation, while the UK model represents a somewhat more diffuse approach. When engaging in such a discussion, however, it needs to be kept in mind that FIT programmes and their design, implementation and impact constantly change and that a discussion can only reflect the situations at the time of writing.

2.1 The Ontario Case – A Story of Fragmentation

Ontario's energy market was opened to foreign operators about a decade ago. Yet the market continues to be state regulated, with several state agencies regulating the electricity supply, adjusting and indirectly controlling electricity prices.

In 2009, the Ontario Green Energy and Green Economy Act 2009 (Green Energy Act, GEA) enabled a guaranteed pricing structure for renewable electricity production through a feed-in tariff[11] conditioned upon a local content requirement.[12] The systems' functioning is ensured by three groups of actors. First, the Ontario Power Authority (OPA) is entrusted with the development and implementation of the programme, including price setting and the administration of contracts.[13] The defined premiums are paid for on the basis of supplier contracts between the OPA and electricity providers.[14] Second, local distribution companies and transmission asset (the electricity towers etc.) owners and system operators play an important role in the implementation of the FIT programme. Green energy suppliers need to enter into contractual relations with these companies to ensure that generated electricity is transmitted and distributed. Third, the Ontario Global Adjustment Mechanism (GAM), a funding mechanism established to adjust the price of electricity supplied within the region, offsets the difference between the electricity market price and the guaranteed FIT premium.

Against this background, three issues deserve further analysis: one, who are the actors; two, how is price setting and development regulated; and three, who administers the local content requirement and what does it entail?

2.1.1 Public and private agents

Ontario's FIT system was established by the Green Energy Act, which enabled the development of a FIT programme 'designated to procure energy from renewable energy sources'.[15] Following ministerial direction on the basis of the Green Energy Act, the programme is *developed* and *implemented* by the Ontario Power Authority. This includes price setting and administering contracts whereby executive contracts are concluded between the provider and the OPA as directed by the government.[16]

The OPA is a regulatory institution established by the Ontario Electricity Restructuring Act in 2004 (Electricity Act).[17] It functions under the direction of the Ontario Ministry of Energy and the Ontario Energy Board (OEB).[18] As Ontario's energy system continues to be state regulated, the OPA 'ensures an adequate, long-term supply of electricity in Ontario' as directed by the Ministry of Energy.[19] In this capacity, it coordinates conservation efforts across the province, develops long term strategies for the power sector and ensures the development of needed generation resources.[20]

Regarding its legal nature, Article 25.1.(1) of the Electricity Act 2004 states that the OPA is a 'corporation without share capital' 'with the business and affairs of the OPA [being carried out] without the purpose of gain'.[21] 'It is not a Crown Corporation' '[nor is it] part of the Ministry of Energy'.[22] Moreover, the Ministry of Energy contends that the OPA is not a public body, despite the fact that it receives and executes directives from the Minister of Energy. At the same time, it maintains that it is not a private sector corporation either.[23] This position has caused confusion among politicians and experts and among the general public, which also perceives the OPA to be a public agency.[24] Meanwhile, the OPA's legal status under various other state Bills and Acts continues to be disputed.[25]

While the OPA is responsible for administering the executive contracts that set out the general terms and conditions, suppliers also need to enter into contractual relations with the transmission asset owners, system operators and local distribution companies to ensure that their generation facility is linked to the transmission assets and that the generated electricity is fed into the system. Hydro One is Ontario's largest transmission company and holds approximately ninety-six percent of all transmission assets within the province while its distribution network covers about seventy-five percent of the region's area. It distinguishes itself from the other eighty-three local distribution companies available in Ontario as it remains a Crown Corporation whose assets are owned one-hundred percent by the government of Ontario – making it a state-owned enterprise.[26] The same is true for its five subsidiaries of which Hydro One Networks Inc. and Hydro Brampton are the most relevant for the FIT programme. It is eventually these local distribution companies and the transmission asset owners with whom electricity generators benefiting from the FIT programme need to work with in order to connect the generator to the network and ensure the functioning of the feed-in process.

Consequentially there are two different contract partners – the OPA signing onto the general terms and conditions (the 'FIT contract') and the distribution and transmission companies having to agree on the specific conditions for connection and implementation.

For the present discussion it is interesting to note that on May 7, 2010 the Minister of Energy and Infrastructure instructed Hydro One and the OPA to coordinate under the FIT programme regarding the Samsung agreement. The instruction states that 'the OPA [shall] submit an updated transmission expansion plan [...] to provide recommendations for development sequencing of priority transmission projects, taking into account the needs of FIT and the Korean Consortium, and lay out an implementation approach that will ensure that key government commitments are met'.[27]

2.1.2 Price setting

Aside from the entities involved in the implementation on a technical or policy level, institutions involved in the complex process of price setting deserve further attention. The GAM, administered by the OPA, is the prime mechanism in this regard. It allows for price adjustments and thus an indirect control of electricity prices within Ontario. This also applies to the FIT programme where the GAM partially funds guaranteed FIT premiums. In Ontario, 'the cost of electricity is recovered through a combination of global adjustment and the hourly Ontario energy price (HOEP, the 'market price') which are inversely related. For example, if HOEP increases, the global adjustment decreases and vice versa'.[28] Depending on whether the difference is within the negative or positive margins, consumers receive refunds or are required to make additional adjustment payments. The amounts change on a monthly basis depending on the actual economic situation.[29]

Electricity costs are thus offset through consumer payments and the global adjustment. For the FIT programme, the market price hardly ever gets to the lowest FIT rate, meaning that the FIT programme is partially funded by the GAM.

The importance of this adjustment becomes apparent when comparing price developments over the last few years. While the average going wholesale price of electricity in Ontario in 2010 was 3.79 cents/kWh, the OPA is offering feed-in tariff contracts at between 45 and 80 cents to companies building new solar power generating facilities, 13.5 cents on land-based wind farms, 19 cents on off-shore wind farms, and between 10.4 and 19.5 cents on biogas projects.[30] This indicates that the average price paid by consumers, the HOEP, is far below the price paid through the FIT programme to competitive electricity providers. On the other hand, a comparison of 2009 and 2010 average electricity prices in Ontario shows that electricity prices as paid by consumers have risen by 9.7% since the GEA entered into force.[31] On that basis, critics of the FIT programme have been arguing for some time that consumer prices will increase substantially – up to twenty-five to thirty percent within the first years because of the FIT measure – and that consumers will finance the programme in large.[32] It should be cautioned, however, against making such allegations *on the basis of recent increases* as experts can show that recent rate increases have been due to the cost of new gas-fired generators rather than the FIT scheme and its implementation.[33] In either case, the FIT price impact is unlikely to show until the FIT system is implemented in larger volumes.[34]

2.1.3 Local content requirements

According to the OPA's 'Feed in Tariff Rules' (FIT rules)[35] Article 2.1, 'the FIT Contract will require that windpower Projects and solar (PV) Projects achieve a Minimum Required Domestic Content Level'. Specific thresholds for the level of local inputs to be incorporated in the contracts are then set out in Article 6.4. of the rules. The levels contained therein range from 25% for wind projects over 10 kW in 2009-2011 to 60% for solar projects over 10 kW in 2011 and beyond (for a detailed overview see below). Thus, a distinction is made regarding the level of local inputs according to the source of energy as well as the size of the project while levels also increase gradually over time.

If a contract facility does not meet the minimum required domestic content level, the supplier will be in default under the FIT Contract meaning it will no longer be eligible to receive the benefits of the FIT programme.

Table 1: Local content requirements of the Ontario FIT programme

FIT - RE Projects >10kW			
Wind projects over 10 kW		**Solar projects over 10 kW**	
Minimum domestic Content level	*Year of commercial operations*	*Minimum domestic Content level*	*Year of commercial operations*
25 %	2009 to 2011	50 %	2009-2010
50 %	2012 and later	60 %	2011 and later

MicroFIT - RE Projects <10kW	
Solar projects equal to or less than 10 kW	
Minimum domestic Content level	*Year of commercial operations*
40 %	2009-2010
60 %	2011 and later

2.2 FIT Programmes in the UK and Germany: A Counter-Approach

While highly fragmented with diffuse responsibilities resting with different bodies, the Ontario FIT programme administration clearly involves certain public activity. This is in stark contrast to the German FIT system – the only FIT system that ever found itself in court, namely the European Court of Justice (ECJ). Germany has issued a purchase obligation for all electricity network operators to purchase all electricity from renewable energy sources at a minimum price. The costs for the programme are divided between electricity supply undertakings that purchase renewable energy and private upstream electricity network operators. The four network operators also manage the implementation of the programme on the basis of supplier-operator contracts. As a consequence, the German government only appears as a legislator issuing a purchasing obligation on the basis of specific requirements designed to meet the underlying public policy objective. Also the funding mechanism is 'private' as costs are divided among private actors with no involvement of public funds or public agents at any stage.[36]

A more 'hybrid'-approach has, allegedly, been adopted by the UK. In the UK, the government, more precisely the Department of Energy and Climate Change (DECC) designed a small-scale renewable energy FIT programme.[37] As in the German case, it is based on a purchase obligation.[38] However, the system focuses more on on-site use, supported by a complex accreditation and licensing system. While a public regulator, the Office of Gas and Electricity Markets (Ofgem) manages the Central FIT register, the accreditation itself is managed by private entities. Only the first step, the accreditation of installation companies is partly governmentally regulated. Also, the system's functioning is managed by accredited installation companies and electricity suppliers. Though the funding mechanism is administered by the Central FIT Register, costs are shared among all electricity suppliers in proportion to the share of the electricity supply market which reallocate the costs to domestic electricity consumers.[39] The UK FIT programme is thus less broad and shows a higher degree of public regulation than the German FIT programme. Yet the resources are generated by private actors and the actual implementation occurs on private basis with the exception of the register. Both the UK and Germany have refrained from introducing a local content requirement.

3 THE WTO'S SUBSIDY AGREEMENT

Subsidies aimed at reducing emissions can take on different forms, ranging from support for research and development, investment tax credits, and price support mechanisms, such as the feed-in tariffs discussed in this paper.[40] The International Energy Agency's database 'Addressing Climate Change: Policies and Measures'[41] distinguishes a range of measures that could be considered to contain subsidy elements, including direct payments to market actors, public investment, and research and development support. However, what might be considered a 'subsidy' from an economic perspective does not necessarily qualify as a subsidy under international trade law. On the contrary, subsidy laws clearly define a set of criteria that need to be fulfilled in order for a measure to legally qualify as a subsidy. This is particularly true for the SCM Agreement. Moreover, not all subsidies identified as such under the SCM Agreement are necessarily illegal. The following paragraphs will introduce the SCM Agreement before analyzing its potential impact on FIT programmes designed for renewable energy generation.

The SCM Agreement provides for a complex web of provisions aimed at regulating subsidies to ensure that they do not (i) injure the domestic economy of another country, (ii) nullify or impair benefits accruing to members under GATT or (iii) pose a serious prejudice to the interest of another member.[42] Recognizing the special nature of subsidies, it provides for procedural rules on countervailing measures that are different from yet complement the rights of members under the WTO's Dispute Settlement Understanding (DSU).[43] Notably, the SCM Agreement only applies to subsidies granted *for* goods but not for services. Services subsidies continue to be addressed through the country specific concessions as stated in their schedules of commitments under the General Agreement on Trade in Services (GATS). This, however, should not be confused with subsidies granted *in the form* of services, which are explicitly covered by the SCM Agreement in alternative (iii) of Article 1.1.

Based on their degree of distorting potential, the SCM Agreement distinguishes between 'prohibited' and 'actionable' subsidies. Export subsidies, or those contingent on local content requirements, are prohibited. In this vein, Article 3 of the SCM Agreement states that 'no member shall grant or maintain subsidies contingent in law or in fact, whether solely or as one of several other conditions, upon export performance or upon the use of domestic over imported goods'. The prohibition only applies to measures that qualify as a subsidy within the meaning of Article 1 SCM Agreement (see box 1 below).

Box 1: The definition of a subsidy

Article 1 SCMA

1.1 For the purpose of this Agreement, a subsidy shall be deemed to exist if:

(a)(1) there is a *financial contribution by a government or any public body* within the territory of a Member (referred to in this Agreement as "government"), i.e. where:

(i) a government practice involves a *direct transfer of funds* (e.g. grants, loans, and equity infusion), potential direct transfers of funds or liabilities (e.g. loan guarantees);

(ii) *government revenue that is otherwise due is foregone or not collected* (e.g. fiscal incentives such as tax credits);

(iii) a *government provides goods or services* other than general infrastructure, or *purchases goods*;

(iv) a *government makes payments to a funding mechanism*, or *entrusts or directs a private body* to carry out one or more of the type of functions illustrated in (i) to (iii) above *which would normally be vested in the government and the practice, in no real sense, differs from practices normally followed by governments;*

[...]

and

(b) a *benefit* is thereby conferred. (*Emphasizes added*)

If a measure is found to be a subsidy within the meaning of Article 1 SCM Agreement, but it is not prohibited, it could be found to be 'actionable' instead. Actionability is contingent on one proving an adverse effect of that subsidy in the other country. In the case of prohibited subsidies, on the other hand, law assumes damage to other economies. Thus, the fact that a subsidy is contingent upon export performance or local content requirements is considered sufficient to establish the existence of an illegal subsidy. For actionable subsidies, however, an adverse effect (Article 5 SCM Agreement) needs to be established or serious prejudice to the interests of other members (Article 6 SCM Agreement) must be present. In addition, an actionable subsidy must be specific – a qualification that is assumed in the case of prohibited subsidies. Also, the strength of remedies available to correct the harm afflicted by the two kinds of subsidies differs substantially. While a prohibited subsidy must be 'withdrawn without delay' (Article 4.8 SCM Agreement), a country perpetrating actionable subsidies 'shall take appropriate steps to remove the adverse effect' of the measure (Article 7.8 SCM Agreement).

However, before a subsidy can be found to be prohibited or actionable, it has to qualify as a subsidy within the meaning of Article 1 SCM Agreement. Accordingly, a subsidy is deemed to exist if there is a 'financial contribution by a government or any public body' 'whereby a benefit is conferred'. This includes the (i) *'direct transfer of funds'*, (ii) a situation where a *'government revenue that is otherwise due is forgone or not collected* (e.g. fiscal incentives such as tax credits) and (iii) when *'a government provides goods or services* [...] or *purchases goods'*. If a government entrusts a private body to carry out one of these functions the agreement can nonetheless apply (alternative (iv)). Further indications as to the scope of these categories can be found in the provisions themselves and in Article 14 SCM Agreement, which provides guidance on the calculation of the amount of a subsidy in terms of the benefit to the recipient.

According to Article 1 SCM Agreement, a financial contribution can take place, amongst others, when a government purchases goods. In order for a purchase to have a subsidizing effect and thus qualify as a 'financial contribution' within the meaning of the SCM Agreement, it needs to distinguish itself from 'normal purchases'. Otherwise any governmental purchase could be prohibited as a subsidy which would substantially limit governments' procurement possibilities (see box 3 below).

This notion is reflected in the requirement that a financial contribution is only considered to have subsidizing effect if it confers a benefit. In this regard, Article 14 on the calculation of the amount of a subsidy in terms of the benefit to the recipient states that 'the purchase of goods shall not be considered as conferring a benefit unless the purchase is made for more than adequate remuneration. The adequacy of remuneration shall be determined in relation to prevailing market conditions for the good or service in question in the country of provision or purchase (including price, quality, availability, marketability, transportation and other conditions of purchase or sale)'.

The decisive criterion then is the market standard. This was confirmed by the Appellate Body in *Canada-Aircraft* finding that 'the marketplace provides an appropriate basis for comparison in determining whether a "benefit" has been "conferred", because the trade-distorting potential of a "financial contribution" can be identified by determining whether the recipient has received a "financial contribution" on terms more favourable than those available to the recipient in the market'.[44] That said, it has been argued that this may not be an absolute benchmark. One expert wrote that 'the Appellate Body itself underlined that the marketplace is just "an appropriate basis for comparison", thus opening the door to the use of other yardsticks. This early qualification of the Appellate Body becomes even more interesting during the current crisis where the market and its laws have been under considerable strain'.[45] This points to an issue of increasing importance, especially in the case of energy markets which are influenced by the complex interaction of natural cartels, derivative trading, political events, governmental regulation, etc.[46] In addition, large sums of subsidies transferred to the energy sector further distort the market. Therefore, in these cases it can be difficult to determine the correct market standard to be used as a benchmark.[47]

For those financial contributions not contingent on export performance (i.e. not prohibitive), such as above market price purchases, one still has to show that the subsidy (i) is specific and (ii) has adverse effects. Specificity is deemed to exist when access to a subsidy is limited in law or in fact to an enterprise or industry or group of enterprises or industries. On the other hand, when a subsidy is 'regulated by objective criteria or conditions' (which must be 'neutral', 'economic in nature' and 'horizontally applicable' and 'not favouring certain enterprises over others') such criteria shall not be deemed 'specific'. For instance, subsidies for small and medium-sized enterprises, provided that they are neutral, are not considered specific. Consequentially, the question is not *how many* industries benefit from the subsidy but whether *all* industries have access – the importance is the 'sector neutrality'. For green energy subsidies it can be argued that, by nature, most of these subsidies will be available to selected enterprises and industries only, that is only those that engage in green energy generation or related manufacturing and services, which would exclude certain industries. On the other hand, it has to be noted that under many FIT programmes the FIT premiums and the contracts (the financial contribution) are available to all electricity suppliers that use certain energy sources. If not further distinction is made, for instance on the basis of size or type of technology, one could argue that the FIT programme is not specific. This, however, has to be seen against the background of a panel decision in the *US-Softwood Lumber* series which noted that 'the availability of a subsidy which is limited by the inherent characteristics of the good cannot be considered to have been limited by "objective" criteria'.[48] The same rationale could apply in the context of green energy where a distinction is made between 'green' and 'traditional' energy. Thus, this is again a discussion that depends heavily on the actual implementation of an individual FIT programme – an issue also recognized by the panel in *US-Upland Cotton* when it noted that 'the concept of an "industry" relates to producers of certain products. The breadth of this concept of 'industry' may depend on several factors in a given case. [...] The breadth or narrowness of specificity is not susceptible to a rigid. quantitative definition. Whether a subsidy is specific can only be assessed on a case-by-case basis'.[49]

Finally, for actionable subsidies, one also needs to test the adverse affects of the measure within the meaning of Article 5 or 6 SCM Agreement. Adverse effects exist under the following conditions: (a) an 'injury to the domestic industry of another member', (b) the 'nullification or impairment of benefits accruing directly or indirectly to other members', or (c) a 'serious prejudice to the interests of another member'.

The 'adverse effects' evaluation naturally depends on the design and execution of a subsidy as well as evidence of causal impacts in a third country's economy. Also, one has to take into consideration the so called *de minimis* standards under Article 15.4 and 11.9 SCM Agreement according to which countervailing measures may not be taken if the subsidy is less than one percent of the per unit value of products exported. For developing countries this level raises to two percent. An exception also applies if the import market share of a developing country is less than four percent, provided that the aggregate share of all developing countries under investigation with shares less than four percent is below nine percent of total imports.

In that regard, determining whether a specific green energy subsidy is prohibited or actionable under the SCM Agreement depends to a critical degree on the exact design of the measure, its impact on foreign economies and the economic position of the country using the subsidy as well as the strength of the sector targeted.

Box 2: Local content requirements and national treatment

The non-discrimination principle goes to the core of WTO law and in many cases it serves as the initial starting point for legal analysis. The principle not only prohibits discrimination among domestic and foreign products (national treatment) but also discrimination on the basis of origin (most-favoured-nation treatment, or MFN treatment).

The national treatment standard can be found in all of the main WTO agreements. Regarding trade in goods, Article III:4 GATT states that 'foreign products shall be accorded treatment no less favourable than that accorded to like products of national origin'. According to this provision, national treatment must be provided 'in respect of all laws, regulations and requirements affecting the […] internal sale, offering for sale, purchase, transportation, distribution or use [of imported products]'. It is important to note that the provision only applies to 'like-products' – a definition dependent on complex considerations. As for local content requirements, determining discrimination is usually quite straightforward. It becomes more difficult though, if it concerns various energy sources as their 'like-status' is highly disputed.

The question that GATT Article III:4 poses is whether the treatment was 'less favourable', not whether a 'different' treatment was applied. Discrimination is thus about experiencing negative treatment. Already in the pre-WTO, GATT-era, a panel found that local content requirements violate the national treatment principle.[50] The issue has remained undisputed, since. On that basis one could argue that governmentally imposed FIT-linked local content requirements pose an incentive to purchase locally produced goods to profit from the programme (whether implemented by the government or private bodies) and thereby unfairly discriminate against domestic products.

As for the SCM Agreement the non-discrimination principle does not apply. Rather, the legality or illegality of a subsidy is determined on the basis of the policy's 'adverse effect'.

4 IS A FIT PROGRAMME A SUBSIDY?

Feed-in tariffs differ substantially from the classical examples of a subsidy such as loan guarantees above market standard, research and development funds and direct investment. In fact, whether a FIT scheme can qualify as 'financial contribution by a government or any public body' is disputed. Whether a financial contribution within the meaning of the SCM Agreement has been executed depends on the nature of the *implementing entity* and its *activities*. In countries where the electricity sector remains public, it is more likely that public bodies implement the FIT measures, while in less regulated electricity markets FIT programmes could be executed by electricity companies under legal direction from the government.

A FIT scheme could potentially qualify as a financial contribution in the form of 'a governmental purchase of goods' because, as established before, a FIT programme essentially is a purchasing guarantee for electricity which qualifies as a good.[51] This may seem counterintuitive at first as some consider electricity a service rather than a good. However, irrespective of its physical properties, GATT 1947 already defined electricity as a good in its Harmonized System (HS) Nomenclature.[52] Concession schedules continue to follow this definition today. Likewise, after years of debate, there seems to be a general recognition that the generation of electricity is a good while the transmission, distribution and related services are services.[53]

Certainly transmission and distribution services also play a role in FIT systems as the purchasing guarantee also involves a guarantee to feed that electricity into the general network – i.e. to ensure transmission. In fact, in FIT systems this guarantee takes the form of a right. Yet, the relationship that a FIT mechanism establishes between the electricity generator and the distribution companies concerns the purchase of electricity and not the services of transmission,[54] the latter remains an issue that distributing companies are concerned with. In either case, if one was to argue that the subsidy also entails the transmission guarantee, this could potentially be covered under the option to 'provide a service' within the same alternative (iii). For comparison of this provision with WTO government procurement provisions, see box 3 below.

There are three different scenarios under which a FIT could be a 'governmental purchase'. First, a public body could use public funds to execute the FIT programme itself. Second, a government could direct the programme's execution to a private body but provide the necessary finances. Third, a government could direct a private body to execute the FIT programme, requiring the body to generate the resources directly through a reallocation of costs or other means. While the first case could be covered by alternative (iii) a government purchases goods or provides services (Article 1.1 (a)1 (iii)) and scenario number two could potentially be covered by the first clause of alternative (iv) (payment to a funding mechanism (Article 1.1(a)1 (iv)), the last case could fall within the purview of the second clause of alternative (iv) (directs a private body (Article 1.1(a)1 (iv)). For the full text, see box 1 above.

This short discussion already points to the most important questions raised by the SCM Agreement: when is a body considered private or public and what difference *does* that make? And *should* FIT programmes be treated differently not on the basis of their effect but on the basis of their public/private nature? The SCM Agreement -born of lengthy negotiations at a time when FIT programmes where beyond what trade experts could have anticipated to ever reach the WTO – certainly does not provide a clear answer to these questions. Also, even if it did, the question of whether such a distinction *should* matter is an issue not of *legal compliance* but of policy choice, an issue this paper does not answer. However, a discussion of the current legal *status quo* and the different challenges arising thereof is the essential starting point of any discussion on the desirable regulation of FIT measures and similar programmes.

Box 3: Government procurement v subsidization

If one conceives of a FIT as a 'purchase of goods by a government', it might as well qualify as government procurement rather than subsidization, experts have suggested.[55] The global government procurement market, amounting to around US$4,733 billion annual spending in OECD countries alone, remains largely outside the realm of WTO law. Currently, only OECD countries are signatories to the WTO's specialized Agreement on Government Procurement (GPA) and in many cases their sub-federal and local institutions also remain outside the GPA's scope. Moreover, GATTs national treatment principle recognizes an exception for 'governmental agencies purchasing for government purpose and not with a view to commercial resale' in Article III:8(a) GATT. This raises the question of whether a FIT policy is implemented by a 'governmental agency' and not for 'commercial resale'. Both issues, though in slightly different terms (the SCM Agreement speaks about 'public bodies' and 'market standard'), also matter for the FIT programme's status under the SCM Agreement and will be discussed in more detail below.

For Ontario, however, it is interesting to note that the government in its Acts qualifies the FIT measures as 'government procurement'. Moreover, the OPA happens to be an entity not covered by the GPA. The Green Energy Act states that the '"feed-in tariff program" means a *program for procurement*, including a procurement process providing standard program rules, standard contracts and standard pricing regarding classes of generation facilities differentiated by energy source or fuel type, generator capacity and the manner by which the generation facility is used, deployed, installed or located'.[56] The provincial government thus classifies the OPA's activities as 'procurement'. It further mandates that 'the Minister shall issue, and the OPA shall follow in preparing its feed-in tariff program, directions that set out the goals relating to domestic content to be achieved during the period to be covered by the program'.[57]

However, as previously mentioned, the mere 'labelling' of an activity as procurement does not suffice to exempt the activity from the scope of GATT. Rather, in order to qualify as government procurement, one would need to establish that the OPA and other actors potentially involved as implementing agencies are *governmental agencies* within the meaning of GATT and that the purchase of electricity is *not for the purpose of commercial resale*.

Experts suggested that if FIT programmes are 'government procurement', as a consequence of the WTO law's structure, they would be free to discriminate against 'whoever they want'.[58] However, the SCM Agreement can apply to government procurement if the payment is made 'above market standards'. Otherwise, the SCM Agreement's alternative (iii) regarding the 'purchase of goods' and 'provisions of goods and services' would be nullified to a large extent.

4.1 Public vs Private – The Nature of the Acting Entity

As mentioned above, the SCM Agreement recognizes that governmental subsidies can be either implemented by the government or any public body, or alternatively by private bodies as directed by the government. The drafters of the agreement clearly sought to regulate both instances as the SCM Agreement expressly applies to both situations (for public bodies alternatives (i)-(iii) and for private bodies alternative (iv)) (see box 1 for the full text).

Already in the case *US – Export Restraints*, the panel noted that these two concepts are 'counterpoints'. 'Public body' and 'private body' are exhaustive options whereby a private body is every entity that is not the 'government or any public body'.[59] This was recently confirmed by the Appellate Body in its ruling on *US-AD/CVD* where it referred to the term 'private body' and other contextual elements of alternative (iv) to interpret the meaning and limits of the term 'government and public body'.[60]

Thus, one could think that it remains without further legal effect whether a public or a private body acts as long as the latter has been instructed by the government. However, the alternative applicable to private bodies, alternative (iv), applies only to functions 'which would normally be vested in the government [and where] the practice, in no real sense, differs from practices normally followed by governments'. This clearly has the potential of substantially limiting the scope of alternative (iv). To understand the provision's implications for the FIT policy discussion, the definition of 'public body' and the meaning of 'functions/ practices normally vested in/followed by governments' deserves further discussion.

The difficulty of determining whether an acting entity is public or private could not be more apparent than in the case of the OPA. As discussed above, the OPA functions under the direction of the ministry and the OEB. Yet, according to the Ontario Electricity Act Article 25.1. (1) the OPA is 'not a Crown Corporation' '[nor is] it part of the Ministry of Energy'.[61] Likewise, the Ministry of Energy contends that the OPA is not a public body, despite the fact that it receives and executes directives from the Minister of Energy.

Until the recent ruling in US-AD/CVD, trade law experts nonetheless believed that WTO law had a simple answer to this: in *Korea-Commercial Vessels*, the panel found that 'an entity will constitute a "public body" if it is controlled by the government (or other public bodies). […] Then any action by that entity is attributable to the government and should therefore fall within the scope of Article 1.1(a)(1) of the SCM Agreement'.[62] The panel had established sufficient control on the basis that the entity was a one-hundred percent state-owned enterprise. It did not analyze in detail whether concrete control was exercised over all activities, though, indicating that a general control relationship is sufficient.

This notion has now been revoked.[63] In *US-AD/CVD* the Appellate Body found that 'the defining elements of the word "government" informs the meaning of the term "public body"'[64] and that 'a public body […] must be an entity that possesses, exercises or is vested with governmental authority'.[65] This turns the 'control-notion' on its head, as the Appellate Body suggests that the public/ private distinction instead depends on an entity possessing governmental *responsibility* and *authority* which is the power to *entrust* or *direct*. 'If a public body did not itself dispose of the relevant authority or responsibility, it could not effectively control or govern the actions of a private body.'[66] Yet it is 'the essence of government to enjoy effective power to regulate, control or supervise individuals'.[67]

Regarding the 'kind of authority or responsibility'[68] the Appellate Body further referred to the 'functions illustrated in the alternatives (i) to (iii)' noting that the 'decision to forego or not collect government revenue that is otherwise due [alternative (ii)], a conduct inherently invoking the exercise of governmental authority […] lends support to the proposition that a "public body" connotes an entity vested with certain governmental responsibilities, or exercising certain governmental authority'.[69] Finally, the Appellate Body noted that 'the legal order of the relevant Member may be a relevant consideration for determining whether or not a specific entity is a public body'.[70] This last point introduces the 'legal order of a country' as a relevant source of information, requiring a case specific analysis for each entity in question. Clearly this introduces a more 'complex' standard than that proposed under the 'control-test' while also limiting the pool of entities likely to be deemed 'public bodies'.

The complexity of the task becomes apparent when reviewing some of the initial remarks regarding the Ontario Power Authority. As mentioned above, Ontario's legal order clearly states that the OPA is not a public body. While the fact that it acts upon the 'direction of' could have arguably met the 'control-requirement' it is not sufficient to meet the standard now set out by the Appellate Body. To the contrary the fact that the OPA does not have its own mandate but acts exclusively upon the direction of the ministry, could indicate that it lacks the required authority and responsibility. On the other hand, the OPA regulates and controls the electricity in the region as it is the entity that 'ensures an adequate long-term supply of electricity within the region'.[71] Also, the OPA is the entity that enters into FIT Contracts thereby implementing the programme and exercising a certain authority. Moreover, the contracts are based on the model FIT Contract, a document designed by the OPA. On the other hand, essential elements of the programme such as the domestic content requirement have been directed by the Ministry of Energy and were not defined by the OPA. The numbers were clearly directed by means of a ministerial directive from 24 September 2009.[72] The design of the FIT Contract was thus more a matter of transforming the ministerial directive into a FIT contract. But it did not involve the task of actually designing the requirements. Likewise, the OPA cannot direct another private entity, such as the distribution companies, to take certain actions but it only oversees their tasks which are performed on the basis of the GEA. This *could* indicate that the OPA itself is not vested with authority but acts exclusively upon the direction of the government, making it a private body.

The situation is not made any easier by the fragmented character of the system and the role of transmission-asset owners and network operators. Again, until recently WTO law seemed to be quite straightforward on this issue in the sense that the command-and-control relationship of state-owned-enterprises (SOEs) was considered sufficient to qualify an entity as a public body – which would have applied to, at least, Hydro One and its subsidiaries. In *US-AD/CVD*, however, the Appellate Body found certain (not all) SOEs to be of a private nature instead. Again, it ruled that any analysis would need to be case specific and would depend on the exact circumstances, informed by the relevant legal order. Where does that leave Hydro One and others?

As for the FIT, network operators and transmission companies clearly have the power to enter into contracts that form a critical element of the FIT system. Also, they perform (and thus maybe provide) the services of transmission and distribution, which arguably, is part of the financial contribution under alternative (iii). Likewise, they are partially responsible for the management of the funding (payment of rewards and collection of electricity prices from consumers). This also applies to the case of Ontario as well as the counter examples of Germany and the UK. On the other hand, the activities they perform are arguably of commercial rather than regulatory nature and governmental authority or responsibility is absent in the conduct of these activities.

Finally the funding mechanism in the case of Ontario (not for Germany and the UK as these programmes are funded through the electricity undertakings) deserves further attention. As outlined before, the GAM is administered by the OPA and the OEB. This relationship could have implications for the nature of the GAM as well as the OPA. That is because the funding that is administered by GAM is public. It could thus qualify as a 'funding mechanism' within the meaning of clause one, alternative (iv) – 'private body not vested with authority *but* administering public funds'.

Determining whether a body is public or private is thus not an easy task – a task dependent on a careful analysis of authorities, responsibilities, transferred functions and the underlying legal order. The above introduction to the issue, however, has shown that each FIT programme might find itself in a different position, depending on very sensitive nuances.

4.2 Private Bodies and 'Normal Functions and Practices'

If an entity is not public, it is private. In this regard alternative (iv) of Article 1.1. (a)(1) states that a 'financial contribution' shall still be deemed to exist if 'a government […] entrusts or directs a private body to carry out one or more of the type of functions illustrated in (i) to (iii) which would normally be vested in the government and the practice in no real sense, differs from practices normally followed by governments'. This provision clearly attempts to ensure that the alternatives (i) to (iii) are not circumvented through the establishment of private bodies or funding mechanisms for the sole purpose of avoiding the 'public body' qualification.[73] However, the provision is limited to 'practices normally followed by governments'.

Two questions arise under alternative (iv): One, does the second clause to alternative (iv) (to entrust or direct a private body) require a cost to the government? And two, is the directed activity a 'practice normally vested in the government which does not differ from practices normally followed by governments'?

4.2.1 The funding source

To date, the WTO has never confronted a case related to FIT programmes. The EU, more specifically the European Court of Justice (ECJ), however, addressed such a scenario in the *PreussenElektra AG v. Schleswag AG*[74] case from 2001. The case concerned German FIT law and European state aid law which, in effect, constitutes the EU's subsidy law. Though one needs to be careful in drawing direct conclusions from a state aid case to a WTO dispute, for the purpose of the present study it is helpful to carefully observe how the ECJ approached and eventually resolved the dispute as it might reveal approaches that could also be useful for the WTO.

As outlined before, in *PreussenElektra AG v. Schleswag AG* the FIT system in question differed from the Ontario programme in as much as Germany had issued a purchase obligation for electricity network operators to purchase electricity from renewable energy sources at a minimum price. The state mandated private operators to purchase energy for a FIT but did not engage in the activity itself. Moreover, the costs for the programme were divided between electricity supply undertakings purchasing renewable energy and upstream private electricity network operators. Against this background, the ECJ found that the German FIT programme could not be considered 'state aid' under European law as a consequence of the absence of any direct or indirect transfer of state resources.[75]

WTO law, on the other hand, seems to reach a different conclusion. In *US-Export Restraints*[76] the panel noted that 'all forms of financial contribution mentioned in (i) to (iv) involved a clear transfer of economic resources in the form of a transfer of something of value, either money, goods or services, from the government, or an intermediary, to a private entity'.[77] In *Canada-Aircraft* a panel further specified that this transfer would not need to be a 'cost to government'.[78] Instead, a financial contribution by the directed entity would be sufficient.[79] Thus, unlike EC state-aid law, a situation where a payment is financed exclusively by the private entity that has been directed by the government to execute a certain 'subsidy programme' would still meet the 'financial contribution' requirement under the SCM Agreement. This is an important conclusion for green energy support programmes such as feed-in tariffs since, as the example of Germany and the UK has shown, FIT programmes can be implemented without any cost to the government.

4.2.2 What is 'normal'?

Alternative (iv) only applies to a 'function normally vested in the government which does not differ from practices normally followed by governments'. Much has been written about this requirement and it remains one of the most controversial aspects of WTO subsidy law. Even the recent Appellate Body ruling that overruled previous panel findings regarding the definition of 'public body' did not clarify this definition in detail. It did, however, indicate that a countries' legal order is the right benchmark for determining the meaning of 'normal' in alternative (iv): 'The reference to "normally" in the phrase [which would normally be vested in the government] incorporates the notion of what would ordinarily be considered part of governmental practice in the legal order of the relevant Member'. In the absence of further elaboration, this could be understood as requiring a judge to carefully analyze each case on the basis of country specific laws. At the same time, the ruling does not necessarily dismiss any previous panel findings in this regard.

Previous panels had basically limited the scope of alternative (iv) to functions of taxation and expenditure. In *Canada-Aircraft* the panel found that only 'certain forms of government action that distort or may distort international trade' can be covered by the SCM Agreement' and that it is the function of the 'financial contribution requirement' to ensure an appropriate distinction.[80] This ruling introduced the important distinction between 'governmental function' and 'regulation'. In *US-Export Restraints* the panel further elaborated on this notion when stating that the terms 'direct or entrust' may not be used to broaden the coverage of the SCM Agreement by including actions normally not covered by options (i)-(iii).[81] Moreover it referred to the findings of an expert group composed during the Uruguay round negotiations, when stating that 'we find very significant the […] interpretation that the […] reference to "practice […] in no real sense different from those normally followed by governments" was a general reference to the delegation to private parties of the particular government functions of taxation and expenditure of revenue, and not a reference to government market interventions in the general sense, or the effects thereof'.[82] The panel in *Korea-Commercial Vessels* later confirmed this reading.[83]

Certainly such an interpretation, one could argue, limits the scope established by alternatives (i)-(iii) as they reach beyond 'taxation and expenditure of revenue'. However, according to the current prevailing opinion, the aim behind the specific wording of alternative (iv) is to strike a balance between the objective of avoiding circumvention of the subsidy rules by directing private entities; and the objective of ensuring that governments retain the possibility of engaging in 'command-and-control regulation' (regulation performed by private actors as directed by the government).

In this regard, specifically looking at FIT policies, Howse has argued that the 'minimum price purchase requirements [of the German FIT system] do not represent the delegation of a governmental function to any private body; rather, they represent a *regulation* of the electricity market, and their directive character is in regulating market behaviour and transactions, not imposing a governmental function on a private body'.[84] This distinction is of great importance for the SCM Agreement. If no distinction was made between regulation and governmental function, any direction by a government that could potentially distort trade would qualify as a subsidy.

The panel in *US-Export Restraints* eloquently summarized this point: 'Not [every] government intervention that might in economic theory be deemed a subsidy with the potential to distort trade is a subsidy within the meaning of the SCM Agreement. Such an approach would mean that the "financial contribution" requirement would effectively be replaced by a requirement that the government action in question be commonly understood to be a subsidy that distorts trade'.[85]

The new 'benchmark' – a country's legal order – however, might introduce a new element as a legal order could stipulate that certain electricity market regulation functions are essentially 'governmental functions'. This is particularly true for those countries that have not, or only partially, liberalized their electricity markets.

4.3 Benefits

If a governmental support measure qualifies as a financial contribution under one of the four alternatives, the next step is to determine whether the contribution also confers a benefit. That is, the contribution's effect on the recipi-ent of the financial contribution. The benefits requirement differs from the 'less favourable treatment standard' under GATT where the analysis focused on the measure's impact on like domestic and foreign products in comparison. For the SCM Agreement, on the other hand, the requirement is limited to the effect for the recipient. As mentioned above, Article 14 of the SCM Agreement informs the scope of Article 1.1. and the calculation of 'benefit'. For Article 1.1. alternative (iii), it states that the purchase of goods shall not be considered to confer a benefit unless the purchase is made for more than adequate remuneration which shall be determined in relation to prevailing market conditions. Thus, for the discrimination standard one needs to compare the treatment of two like products to establish a 'less favourable treatment'. For the benefit standard, on the other hand, the comparison of two products or actors is irrelevant; rather the question is whether the treatment is more beneficial compared to normal market conditions. The like product standard becomes relevant for the analysis of 'adverse effects' under the SCM Agreement – a step only following the analysis of whether a subsidy exists in the first place.

As established before, the objective of a FIT programme is to provide incentives for renewable power generation through the provision of fixed prices that are higher and more stable than those available under normal conditions. Eventually the measure is nothing but a purchasing guarantee. The guarantee as such, the prices above market standard and the unnaturally long duration of the contract all point to a financial contribution above market standard – that is a benefit. Moreover, the FIT payment on the basis of deemed rather than actual generation as well as the 'right to connect' – so the guarantee that one's electricity gets fed into the system and will be transmitted – arguably confer a benefit.

4.4 Local Input Contingency and Adverse Effects

As mentioned above, a subsidy is prohibited if it is contingent on export performance or the use of local input over foreign input. In cases where FIT measures (provided they were found to be a subsidy as discussed above) involve local content requirements such as the one in Ontario, the measure would have to be withdrawn without delay. In other cases, the complainant would need to show an 'adverse effect'. As mentioned above, in the absence of a local content requirement and assuming that a claim does not concern the position of green energy technology manufacturing, the analysis would most likely shift to the adverse effect on competing energy suppliers if these are found to be like-products.

Many observers have suggested that meeting the high standard of proof required under the SCM Agreement regarding the adverse effects requirement, it could be close to impossible to show such an adverse effect in the energy market. This is due to the highly distorted global energy market in particular for fossil fuels and the difficulty of linking particular effects to one national FIT programme. Some experts, however, suggested that at least for regional energy markets, such as the North American market where competition is 'close to non-distorted', the situation could be different.[86] In particular, when the adverse effect concerns import and export structures of a particular natural resource such as coal. For the moment, however, all this seems to be a theoretical mind game at most.

5 JUSTIFYING FITs ON ENVIRONMENTAL GROUNDS: THE ROLE OF ARTICLE XX GATT

For a long time, Article XX GATT has played an important role in the regulation of environment related trade measures and trade related environment measures. The provision acknowledges that certain measures, otherwise in violation of WTO provisions, should be justified if they are necessary to achieve selected public policy aims and are applied in a non-discriminatory manner. The most well known 'exceptions' refer to measures 'necessary to protect human, animal or plant life or health' (para b) and measures 'relating to the conservation of exhaustible natural resources [...]' (para g) (see also box 4 below)

Box 4: Exceptions to the rules - Article XX GATT

GATT Article XX

Subject to the requirement that such measures are n*ot applied* in a manner which would constitute a *means of arbitrary or unjustifiable discrimination* between *countries where the same conditions prevail*, or a *disguised restriction on international trade,* nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:

(a) necessary to protect public morals;
(b) necessary to protect human, animal or plant life or health;
(c)-(e) [...]
(g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption;
(h)-(j) [...]

In addition to the specific exception paragraphs, the 'chapeau' of GATT Article XX also stipulates that 'such measures [may] not [be] applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade'. In other words, the measures referred to in one of the specific paragraphs, like those relating to conservation of exhaustible natural resources under paragraph (g), will only be considered justified if they are administered in a way that does not constitute an arbitrary or unjustified discrimination and is not disguised restriction on international trade. This non-discrimination requirement, however, refers only to 'as applied' measures which is different from the WTO violations addressed by the individual paragraphs of Article XX GATT. A very simple (and simplified) example would be if a country implements a trade ban of certain products on public health grounds, that ban would have to be applied in a non-discriminatory manner, meaning it would have to apply to all such products, irrespective of their origin or other (for the policy irrelevant) characteristics. But the ban itself does not qualify as a disguised restriction within the meaning of the Article XX GATT chapeau as it was previously found to fall under the public health exception. Otherwise the article would obviously be an infinite loop.

Two questions deserve further analysis in the context of the above discussion. First, whether Article XX GATT can be invoked as a defence also for non-GATT claims, in particular those claims brought forward under the SCM Agreement. Second, whether a FIT measure, with or without a local content requirement, could potentially, in principle, be justified on the basis of Article XX GATT.

5.1 Applicability to the SCM Agreement

Whether Article XX GATT can be invoked as a defence to non-GATT claims continues to be a controversial issue. The question is whether a country that has found to be in violation of a WTO agreement other than GATT can refer to Article XX GATT as a potential justification, even if the non-GATT agreement in question does not specifically refer to GATT Article XX. In the *China-Audiovisuals*[87] case from late 2009, the Appellate Body for the first time implicitly ruled on the issue. It found that Article XX GATT was indeed available as a defence to certain violations of accession protocols despite a lack of an explicit reference to Article XX GATT. However, the case only concerned one specific clause in China's accession protocol referring to 'in accordance with the WTO agreement' which was the basis for the Appellate Body's decision in favour of the applicability of Article XX GATT.[88] In a 2011 decision, on the other hand, a panel denied the availability of Article XX GATT as a defence to a breach of China's accession protocol as the provision in question, unlike the one analyzed by the Appellate Body in *China – Audiovisuals*, did not refer back to the WTO agreements.[89] Likewise, the Appellate Body carefully avoided any general statement that would support the argument that, in turn, Article XX GATT is available to all WTO claims including to claims under those WTO agreements that make no reference to Article XX GATT, such as the Customs Valuation Agreement or the SCM Agreement.[90]

In the absence of a clear ruling by either panels or the Appellate Body, various positions have been argued.[91] Many positions are certainly influenced and coloured by policy preferences rather than clinically isolated legal arguments. In fact, as the WTO agreement is a negotiated outcome that does not provide for only one answer, arguments in favour or against certain positions are necessarily influenced by non-legal considerations. This is particularly true for sensitive issues such as Article XX GATT. A close look at various arguments, however, should inform the present discussion.

Some see the SCM Agreement and other agreements as *lex specialis*[92] to the GATT and thus assume that the general provisions of GATT that are not departed from – such as Article XX GATT – remain applicable.[93] This argument has been based, in large, on the fact that the SCM Agreement develops GATT Article XVI, which addresses subsidies. Moreover, the same has been argued with reference to Article II:2 of the Marrakesh Agreement which states with regard to all multilateral WTO agreements that 'the agreements and associated legal instruments [..] are integral parts of this Agreement, binding on all Members'.[94] In *Korea-Dairy*, with reference to that provision and other parts of the WTO Agreement, the Appellate Body found that 'the WTO Agreement is a "single undertaking" and therefore all WTO obligations are generally cumulative and WTO members must comply with all of them simultaneously'.[95] Some experts have argued that this indicates that special WTO agreements need to be read in conjunction with GATT, meaning that GATT Article XX can be invoked even in cases of SCM Agreement claims.

However, the opposite argument seems to be supported by the fact that agreements such as the WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement) specifically refer to GATT Article XX and clarify the relationship of that provision with the non-GATT agreement. The silence in the SCM Agreement could thus indicate that Article XX GATT was not meant to be available as a justification clause. This could be further supported by Article 3.1 SCM Agreement which states that certain subsidies are prohibited 'except as provided in the Agreement on Agriculture'. The agreement makes no similar exclusion for Article XX GATT exceptions.

Finally, one needs to take into account former Article 8 of the SCM Agreement. This provision originally included a defined list of subsidies to be deemed 'non-actionable' that is, subsidies immunized from challenge in WTO dispute settlement, even if they were found to meet the criteria discussed above. This list included certain subsidies for research and development, environmental protection and to disadvantaged regions. The provision applied provisionally for the first five years that the SCM Agreement was in force. Since its effective expiration, WTO members have been unable to agree to either continue with the list as it now stands or create a different list. Consequentially, at the moment no exceptions apply to the SCM Agreement though there seems to be a silent agreement that certain subsidies are simply not challenged. The existence of a provision similar to Article XX GATT but designed specifically for the SCM Agreement could indicate that parties found it necessary to ensure that subsidies were covered by an exception clause allowing 'justified' subsidies, acknowledging that Article XX GATT was not applicable. Moreover, the fact that members designed a special exception clause rather than inserting a reference to Article XX GATT similar to that included in the SPS Agreement, could indicate that they found the scope of Article XX GATT unsuitable and preferred different language for the SCM Agreement.

5.2 Justification of FITs vs Justification of Local Content Requirements

The second issue that needs to be addressed with regard to Article XX GATT is the provision's substantial scope and its impact for FIT systems if they are found to constitute a subsidy within the meaning of the SCM Agreement. When engaging in this discussion it is important to note that there is a difference between FIT systems contingent on local input requirements and those found to constitute an actionable subsidy on the basis of an *adverse effect* – that is FITs free of local content requirements. Article XX GATT can be invoked to justify a measure otherwise found to violate a WTO agreement. The Article XX GATT analysis thus concerns the *violation* and not the measure as a whole. For FITs contingent on local input requirements this means that the local content obligation would need to meet the Article XX GATT standard – one would need to show that the requirement itself is 'necessary to protect human, animal or plant life or health' or measures 'relating to the conservation of exhaustible natural resources [...]'. If, however, a FIT programme is found to be actionable under the SCM Agreement on the basis of an adverse effect, the FIT as a subsidy would be subject to the Article XX GATT analysis. Here the issue would be whether the FIT measure is 'necessary' or 'related to'. Both discussions, however, have the same starting point: whether 'climate protection' can be argued under either of the exceptions.

Already in 1996, one year before the adoption of the Kyoto protocol and many years before the climate change discussion fully entered the public stage, in the *US-Gasoline* case,[96] the Appellate Body found that the protection of clean air could be covered by paragraph (g) as clean air qualifies as an 'exhaustible resource' within the meaning of that provision.[97] Only recently, in 2008, was Article XX GATT further strengthened (though only regarding paragraph (b)), when the Appellate Body ruled in the *Brazil-Tyres* case, that even a measure whose contribution is not immediately observable, can be justified under Article XX GATT.[98] It specifically referred to measures aiming at climate change mitigation when it stated that 'the results obtained from certain actions – for instance, measures adopted in order to attenuate global warming and climate change [...] may manifest themselves only after a certain period of time – can only be evaluated with the benefit of time'.[99] In response to this ruling, many observers have argued that climate change mitigation measures can generally be justified under Article XX GATT. This, in turn, has led to a trend in generally assuming that any measure with the aim of mitigating climate change is more or less 'automatically' justified under one of the Article XX GATT alternatives (though not the *chapeau* of Article XX GATT which requires a non-discriminatory application).

The second step of the analysis concerns the measure at issue – either the local content requirement or the FIT as such. The first scenario has recently been fuelled by public discussion on a related case, the dispute between the US and China over Chinese green energy support measures.[100] Robert Howse, for instance, suggested with regard to environmental necessity under Article XX GATT and local content requirements that 'China has good grounds, environmental grounds, for wanting to ensure its security of a domestic supply of alternative energy technologies in the future. [Thus] there might be a plausible argument, which is that China's demand for clean energy is so enormous that it would be irresponsible for China not to take measures to ensure it has an adequate domestic industry in this area'.[101] In a subsequent discussion, he further clarified that 'much would depend on the existence of exceptional facts about China – not only its status as a developing country with limited possibility for technology transfer [...] but its exceptionally great demands for alternative energy, and the life and death environmental situation behind those needs'.

This preliminary position, however, is clearly directed at China's special economic position and not FITs or other countries in general. Also, this view does not elaborate on the question whether less trade restrictive alternatives would be available. In either case, as mentioned above, this discussion might be one of 'policy positions' rather than legal arguments. As for the FIT itself, however, the question is equally filled with political sensitivity as the questions concern whether FITs are 'environmentally necessary' or 'relate to exhaustible resource conservation' – an issue beyond legal reasoning.

6 CONCLUSION

Should a WTO panel find that the 'Buy-Ontario' clause violates WTO law, it would not be news to trade law experts, despite its case-specific impact. A ruling on the subsidy question, however, could clarify a number of outstanding issues and, in that regard, introduce greater legal certainty.

As the above discussion has shown, much depends on whether the entities implementing a FIT programme are public or private. This aspect is important, since the very the first step in the analysis of whether a financial contribution constitutes a subsidy, concerns the nature of the implementing entity. The recent Appellate Body ruling in *US-AD/CVD (China)* critically informs this assessment, as the Appellate Body extensively discussed the characteristics an entity must possess in order to qualify as a 'public body' within the meaning of the SCM Agreement. In so doing, the Appellate Body disagreed with the findings (and thus established requirements) of a series of previous panels, pushing WTO lawyers onto new and unexplored ground.

Most importantly, the Appellate Body held that an entity must possess, exercise or be vested with 'governmental authority' in order to qualify as a 'public body'. It further noted that, among other, 'the legal order of the relevant Member may be a relevant consideration for determining whether or not a specific entity is a public body'. In the light of this complex 'set of cosiderations', it is by no means easy to determine whether an entity is public or private. The case of Ontario was very telling in this regard: Ontario's legal order clearly states that the OPA is not a public body, and other factors also indicate that it is a private body. However, the funding mechanism (or GAM), which is administered by the OPA and the OEB, is public. Comparing this example with the German and UK FIT programmes further demonstrates that each FIT programme might find itself in a different position depending on sensitive nuances in its statutes and implementation.

If a FIT measure is found to constitute a subsidy, it is by no mean automatically illegal. To the contrary, the SCM Agreement only means to regulate subsidies that could adversely affect other economies – 'prohibited subsidies' (contingent on export performance or local content requirements) and 'actionable subsidies' (that have a clear, causal adverse effect on other markets). FITs paid on the basis of the use of domestic over foreign input could thus be prohibited by the subsidy accord. For all other FITs, however, the question would be whether they actually have an 'adverse effect' and if so, whether a complaining party can prove that harm. Proving a causal adverse effect, in particular in other energy markets, could be a highly complex and difficult task, as the paper outlined.

The WTO, however, provides 'special rules' for measures taken to protect the environment or natural resource conservation – Article XX GATT. The paper outlined the controversy over whether these rules could also apply to measures treated under agreements other than GATT, including the SCM Agreement. The issue is being debated with great enthusiasm by trade law experts and policy makers, often informed by policy beliefs rather than purely legal considerations. In either case, whether Article XX GATT applies or not, it is unclear whether FIT programmes as a measure to combat climate change fall within the substantive scope of that provision. This question is likewise informed by political debates – but also by economic reasoning, making the task even more complex. For instance, as the paper shows, there are different opinions as to whether 'local content requirements' can ever be seen as 'necessary to protect the environment' following the domestic capacity argument. Likewise, it is questionable whether there is only one answer to the question of whether FIT programmes are 'effective' in limiting air pollution.

Both discussions, as well as many other aspects raised above, point to the question of whether the distinctions currently made, or potentially made, by applicable WTO law are fair or desirable from a trade and climate policy perspective. The paper has not attempted to answer that question – clearly, even if a ruling is issued on the case discussed in the paper, WTO members will need to answer that question, because it is a question of *should* and not a question of the *status quo*.

In this regard, the most important outcome of the ruling could well be its impact on expert discussions. As this paper showed, the WTO agreements allow for various arguments and interpretations, which reflects the WTO's nature as a body focused on negotiated outcomes. It will be up to WTO members to decide whether they find that these options provide them with the right balance between a sufficient margin of manoeuvre to promote sustainable development and address climate change and protection against arbitrary trade restrictions, or whether a renegotiation would be beneficial.

ENDNOTES

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2 Miguel Mendonça, *Feed-in tariffs: Accelerating the Deployment of Renewable Energy,* (Earthscan, London, 2007).

3 Robert Howse, *Climate Change Mitigation Subsidies and the WTO Legal Framework: A Policy Analysis*, (IISD Trade, Investment and Climate Change Series, 2010).

4 *Canada-Certain Measures affecting the renewable energy generation sector (Canada-Renewable Energies)* WT/DS412; Also note *China-Measures concerning wind power equipment (China-Wind Power)* WT/DS419. That case has been settled in the meantime. See ICTSD Bridges Weekly, 8 June 2011, 'US Proclaims Victory in Wind Power case; China Ends Challenged Subsidies' availbale at: http://ictsd.org/i/news/bridgesweekly/108230/.

5 Feed-In Tariff Program Rules, Version 1.3.2, 29 October, 2010, Section 6.4(a), (henceforth FIT Rules).

6 *Canada-Renewable Energies,* Request for Consultations, WT/DS412/1.

7 'Richard Blackwell, Japan takes issue with Ontario's green energy plan', The Globe and Mail, 13 September 2010, available at: http://www.theglobeandmail.com/report-on-business/japan-takes-issue-with-ontarios-green-energy-plan/article1705239/. It should be noted, however, that the elimination of coal-fired plants is currently achieved through an increase in gaz generators with the FIT having no impact on that development.

8 'Ontario says Samsung deal to make it green leader', Reuters, 21 January 2010, available at: http://www.reuters.com/article/2010/01/21/us-samsung-idUSTRE60J3SR20100121.

9 Blackwell, *supra* 7.

10 European Court of Justice, *PreussenElektra AG v. Schleswag AG*, 13 March 2001, Case ECJ C-379/98 (*PreussenElektra*).

11 Ontario Green Energy and Green Economy Act, 2004, Schedule B: Part II 7, (*henceforth* Green Energy Act).

12 Green Energy Act, Schedule B II 7(3).

13 Green Energy Act, Schedule B II 7(1).

14 FIT rules, *supra* 5, s 1 (2.1).

15 Green Energy Act, section 25.35.

16 Green Energy Act, Schedule B, Part II 7(1).

17 Ontario Electricity Restructuring Act, 2004 (*henceforth* Electricity Act 2004), Part II.1.

18 *Ibid*.

19 Ontario's energy market system was opened in May, 2002. For a variety of reasons, prices rose and the government imposed a four-year price cap. In 2003, the government appointed a task force to address concerns about the adequacy of supply after a decade in which no generation capacity had been added despite increased demand. In 2004, the government passed legislation that provided for the creation of the Ontario Power Authority to procure new generation, initiate conservation measures and craft a long-term plan for the electricity sector.

20 Electricity Act 2004, Part II. 1 s 25.2(1).

21 Electricity Act 2004, Part II.1 s 25.2(1).

22 Electricity Act 2004, Part II.1, s 25.3.

23 Annual Report of the Environmental Commissioner of Ontario 2006-2007 Supplement, p. 148, available at: http://eco.on.ca/eng/uploads/eng_pdfs/2007/Final_supplement0607.pdf.

24 *Ibid.*

25 *Ibid.*

26 Ontario Electricity Act, 1998, Article 48 ff; Hydro One 'Quick Facts', available at: http://www.hydroone.com/OurCompany/Pages/QuickFacts.aspx.

27 Letter by Minister Brad Dugui, Ministry of Energy and Infrastructure, send to the Chief Executive Officer of the Ontario Power Authority, 7 September 2010. The letter is no formal directive. A copy of the original is available at: http://www.powerauthority.on.ca/sites/default/files/page/16599_MEI_Directive_to_update_H1_09_instruction_May_7_10.pdf.

28 'Much of the generation in Ontario is associated with some fixed pricing mechanism, either regulated or contracted prices. These contracts affect the final payment made by consumers. Consumers initially pay market prices for their electricity. Consumers might be charged 5-minute or hourly market prices, or may be paying a fixed rate to their local distribution companies. Each month, consumers then receive an adjustment amount to account for the difference between the market price for energy and the prices paid to certain regulated and contracted generators. This adjustment is called the "global adjustment". It can be positive or negative – that is, it can be a credit or a charge to a customer's account. As a settlement adjustment based on the difference between the energy market price and the various contracted prices, the global adjustment has the affect of buffering a portion of consumers' energy purchases from changes in energy market prices – either up or down. The amount of the buffer depends on the ratio between the amount of production paid a fixed contracted price and the amount of energy consumed by Ontario consumers. The higher the ratio, the more insulated consumers are from changes in the energy market price (the HOEP). The extent of the buffer from changes in the HOEP does not depend on the level of the prices as contracted but instead the amount of production that is contracted.' Excerpt from: 'The role of fixed price contracts and global adjustments in mitigation price changes to consumers', Ontario Independent Energy Systems Operator (IESO), 2010.

29 *Ibid.*

30 Feed-in Tariff Prices for Renewable Energy Projects in Ontario, 13 August 2010, Ontario Power Authority, available at: http://fit.powerauthority.on.ca/Page.asp?PageID=1115&SiteNodeID=1052.

31 Ontario Energy Board, Electricity Prices, latest update available at: http://www.oeb.gov.on.ca/OEB/Consumers/Electricity/Electricity+Prices#prices.

32 Paul Gipe, 'Ontario feed-in tariffs creating solar jobs at the cost of a donut per month', 23 November 2010, available at: http://www.grist.org/article/2010-11-23-ontario-feed-in-tariffs-creating-solar-jobs; and Derek Wong, 'Ontario Feed-in Tariff Program: $8 Billion of Deals So Far', Blog entry on CARBON 49, 14 April 2010, available at: http://www.carbon49.com/2010/04/ontario-feed-in-tariff-program-8-billion-of-deals-so-far/.

33 Personal communication with Tom Adams, Independent Energy and Environment Consultant, expert for the Ontario Energy system. Communication from Mar-April 2011.

34 *Ibid*.

35 FIT rules, *supra* 5.

36 ECJ *PreussenElektra, supr*a 10, pp. 58-60.

37 Miguel Mendonça, *The UK Feed-in Tariff: A User Survey*, Working Paper (Birbeck University of London, London, 2011), p. 5.

38 *Ibid*, p. 8.

39 *Ibid*, p. 9.

40 Sujata Gupta et al, 'Policies, Instruments and Co-operative Arrangements', in: Metz et al (eds.), *Fourth Assessment Report of the Intergovernmental Panel on Climate Change,* (CUP, Cambridge, 2007), p. 761–2.

41 International Energy Agency's Database Addressing Climate Change: Policies and Measures, available at: www.iea.org/textbase/pm/?mode=cc.

42 Agreement on Subsidies and Countervailing Measures, Part III, Art. 5 Adverse effects, (*henceforth* SCM Agreement).

43 SCM Agreement, Part V, Countervailing Measures.

44 *Canada – Measures Affecting the Export of Civilian Aircraft (Canada-Aircraft)*, Panel report, WT/DS70/P/R, para. 157.

45 Luca Rubini and Ingrid Jegou, *The Allocation of Emission Allowances Free of Charge: Legal and Economic Considerations, ICTSD Programme on Competitiveness and Sustainable Development* (ICTSD, Geneva, forthcoming 2011).

46 *Ibid*.

47 For an extensive discussion see Luca Rubini, *The definition of State Subsidy and State Aid: WTO and EC Law in Comparative Perspective,* (Oxford University Press, Oxford, 2009), pp. 262-286.

48 *US-Final Countervailing Duty Determination with respect to certain Softwood Lumber from Canada (US-Softwood Lumber IV)*, Panel report, WT/DS257/P/R, para 7.116.

49 *US-Subsidies on Upland Cotton (US-Upland Cotton),* Panel report, WT/DS267/AB/R, para 7.1142.

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51 Was it to qualify as a service, the SCM Agreement would not be applicable as alternative (iii), half-sentence 2 only applies to the 'purchase of goods'.

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53 Christina Voigt, *Sustainable Development as a Principle of International Law. Resolving Conflicts Between Climate Measures and WTO law* (Martinus Neijhoff, 2009), p. 218.

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57 *Ibid.*

58 Expert discussion on 'Trade versus Environment', *supra* 55.

59 *United States-Measures Treating Exports Restraints as Subsidies (US-Export Restraints)*, WT/DS194/P/R, Panel report, para 8.49.

60 *US-Definitive Antidumping and Countervailing Duties on Certain Products from China* (*US-AD/CVD (China)*), Appellat Body report WT/DS379/AB/R, para 297.

61 Ontario Electricity Act, Part II.1.

62 *Korea-Measures Affecting Trade in Commercial Vessels (Korea-Commercial Vessels)*, Panel report WT/DS273/P/R, para 7.50.

63 *US-AD/CVD (China)*, Appellate Body report, para 322.

64 *Ibid*, para 290.

65 *Ibid*, para 317.

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67 *Ibid*, para 290.

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70 *Ibid*, para 296.

71 Electricity Act 2004, Part II.1.

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73 Rubini 2009, *supra* 50, p 111.

74 ECJ *PreussenElektra, supra* 10.

75 *Ibid*, I-2099.

76 *US-Export Restraints*, Panel report, para 8.29-30.

77 *Ibid, see also* Rubini 2009, supra 47, p 111.

78 *Canada-Aircraft*, Appellate Body report, para 160.

79 *Ibid*, para 160. In fact, the panel noted that in the situation identified by alternative (iv) (direction of a private body) 'the net cost could be incurred entirely by the private body rather than the government. Canada's interpretation […] (i.e. to include net cost to government) would render [alternative (iv)] meaningless, since a form of "financial contribution" explicitly included in Article 1.1(a) would automatically (i.e. because it would never meet the net cost to government test) be excluded by Article 1.1(b)'.See also Robert Howse, 'Post hearing Submission to the International Trade Commission: World Trade Law and renewable Energy: The Case of Non-Tariff Measures', 5 May 2005, *Renewable Energy and International Law Project*, p 22.

80 *Canada-Aircraft*, Panel report, para 9.119.

81 *US-Export Restraints*, Panel report, para 8.56-59.

82 *Ibid*, para 8.72.

83 *Korea-Vessels*, Panel report, para 7.30.

84 Howse 2010, supra 6 ,p. 12.

85 *US-Export Restraints,* Panel report, para 8.62.

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87 *China-Measures related to the Exportation of Various Raw Materials (China-Raw Materials)*, Panel report, WT/DS394/P/R; WT/DS395/P/R; WT/DS398/P/R.

88 *China-Measures Affecting Trading Rights and Distribution Services for Certain Publications and Audiovisual Entertainment Products (China-Audiovisuals),* WT/DS36.

89 *Ibid*, para 233.

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93 Howse 2010, *supra* 6, p. 17.

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