ENABLING THE ENERGY TRANSITION AND SCALE-UP OF CLEAN ENERGY TECHNOLOGIES: OPTIONS FOR THE GLOBAL TRADE SYSTEM
E15 Expert Group on
Clean Energy Technologies and the Trade System

Enabling the Energy Transition and Scale-Up of Clean Energy Technologies: Options for the Global Trade System

Synthesis of the Policy Options*

January 2016


NOTE

The policy options presented in this synthesis are the result of a collective process involving all members of the E15 Expert Group on Clean Energy Technologies and the Trade System. It draws on the active engagement of these eminent experts in discussions over multiple meetings as well as think pieces commissioned by the E15Initiative and authored by group members. Ricardo Meléndez-Ortiz was the author of the report. Ingrid Jegou was the lead writer and Mahesh Sugathan contributed significantly to the final paper. While a serious attempt has been made on the part of the author to take the perspectives of all group members into account, it has not been possible to do justice to the variety of views. The policy recommendations should therefore not be considered to represent full consensus and remain the responsibility of the author. The list of group members and E15 papers are referenced.

The full volume of policy options papers covering all topics examined by the E15Initiative, jointly published by ICTSD and the World Economic Forum, and launched at the Forum’s Annual Meeting at Davos-Klosters in 2016, is complemented with a monograph that consolidates the options into overarching recommendations for the international trade and investment system for the next decade.

E15 INITIATIVE

Jointly implemented by the International Centre for Trade and Sustainable Development (ICTSD) and the World Economic Forum, the E15Initiative was established to convene world-class experts and institutions to generate a credible and comprehensive set of policy options for the evolution of the global trade and investment system to 2025. In collaboration with 16 knowledge partners, the E15Initiative brought together more than 375 leading international experts in over 80 interactive dialogues grouped into 18 themes between 2012–2015. Over 130 overview papers and think pieces were commissioned and published in the process. In a fast-changing international environment in which the ability of the global trade and investment system to respond to new dynamics and emerging challenges is being tested, the E15Initiative was designed to stimulate a fresh and strategic look at the opportunities to improve its effectiveness and advance sustainable development. The second phase of the E15Initiative in 2016–17 will see direct engagement with policy-makers and other stakeholders to consider the implementation of E15 policy recommendations.

For more information on the E15Initiative:
www.e15initiative.org
The E15 Expert Group on Clean Energy Technologies and the Trade System had three objectives

- Examine the major challenges and opportunities for promoting the use of clean energy technologies (CETs) for the benefit of climate action through trade.
- Identify constraints and possible areas for improvement in the global trade system.
- Develop options for the global trade system to support the scale-up of CETs responding to the urgency of the climate change imperative.

Overarching questions and issues the Expert Group was tasked to consider

- Given the crucial role of CETs in addressing climate change, in what ways can the global trade system support the wider use of CETs?
- Are current international regulatory frameworks and trade-related policies adapted to meeting the present and future challenges posed by climate change?
- How can the trade system respond to the specific vulnerabilities and concerns related to climate change of countries at different levels of development?
- Is there a need to reform the WTO or for non-WTO initiatives to explicitly tackle CETs as a set of particular goods, services, and knowledge that require a differentiated approach?
- To strengthen trade governance in CETs, what options are available for reforming specific WTO goods agreements (e.g. the Agreement on Subsidies and Countervailing Measures and the Anti-Dumping Agreement) or the General Agreement on Trade in Services?
- Is there a need for a specific trade agreement on CETs?

Expert Group analysis and policy proposals were submitted in two forms

1. Critical issues studied through think pieces commissioned for the E15 Initiative. These papers are referenced on page 16 and can be accessed at http://e15initiative.org/publications/.

2. Policy options presented in this synthesis and compiled in the summary table. The options are grouped under two categories:

   - Addressing systemic issues
   - Reform of existing rules and the formulation of new rules and agreements
     - Strengthening markets
     - Enabling pro-CET policies beyond tariffs
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Scaling-up the supply and use of clean energy to enable a decarbonization of the global economy is imperative if the world is to stay within the target of limiting temperature rise to 2 degrees Celsius. In fact, according to the International Energy Agency, energy production and use were responsible for 72% of global greenhouse gas emissions in 2012. The Fifth Assessment Report of the Intergovernmental Panel on Climate Change signals that energy-related emissions need to peak between 2020 and 2030 and then decline, reaching zero by the end of this century. The Paris Agreement of December 2015 places the burden of implementation of action for mitigation on national governments and their pledges to de-carbonize or neutralize carbon in each country’s energy supply and production base.

A scale-up of clean energy would further support several of the Sustainable Development Goals the world has set itself in the 2030 Agenda, including enhanced access to energy, in turn capable of stimulating growth and improving welfare. A shift away from fossil fuels would also impact positively on air quality, pollution, and global health.

Facilitating international trade in the area of clean energy technologies (CETs) will contribute to lowering the costs of clean energy and thereby to scaling up its use. Research supports the notion that this will mitigate greenhouse gas emissions in addition to the economic gains that can be expected from an optimization of supply chains.

Recent developments add to the urgency of addressing the matter. As governments put in place policies to stimulate the clean energy sector, trade tensions arise, testing the limits of current rules and causing a chill on investment. Several disputes on related policies have made their way to the WTO, and cases of dumping and subsidy investigations are regularly being initiated.

Consequently, there is an increased recognition of the nexus between trade and energy. The former Director General of the WTO, Pascal Lamy, stated in 2013 that “what is sorely lacking in the current WTO context is a constructive and forward-looking discussion among members on the rapidly expanding trade and energy interface.”

There are examples of concrete action. The International Energy Charter was adopted in May 2015, reflecting the accession of a broader group of countries to the previously more European-dominated Energy Charter. In parallel, several recent regional trade agreements take a proactive stance in the area of clean energy, as does the Asia Pacific Economic Cooperation. In 2014, a group of WTO members came together in a negotiation towards reaching an Environmental Goods Agreement (EGA). An explicit aim of the EGA is to address CETs in order to contribute to climate change mitigation.

The E15 Expert Group on Clean Energy Technologies, convened by ICTSD, Friedrich Ebert Stiftung, and Chatham House, in partnership with the World Economic Forum, has put forward a broad set of policy options. These seek to address obstacles to trade in CETs, improve energy trade governance, and use trade policy proactively in support of clean energy. Whereas many of the systemic options are challenging, requiring a great degree of convergence among the full WTO
membership, short-term proposals more easily within reach are also identified. A variety of options are also suggested for improving market access. Many relevant policy processes, including regional trade agreements, the EGA, and the Trade in Services Agreement, are underway and thus present good opportunities for implementing several of these options. The Group has further established that existing policy space, in particular in the area of subsidies, needs to be clarified, and in some cases strengthened.

A first meeting of the Expert Group was convened in June 2013, which was to a large extent informed by ICTSD’s proposal for a Sustainable Energy Trade Agreement, and inspired by the Appellate Body ruling in the first climate-related case before the WTO Dispute Settlement Body, the Canada-Renewable Energy/FIT case. Between this and the third meeting, a breakthrough in the area of market access for clean energy goods was made with the announcement of the EGA negotiations. Several of the options explored in the early stages of the Expert Group process, which at the time seemed almost like utopia, were suddenly within reach. We are confident that the options put forward for consideration can make a considerable difference to scaling up clean energy and responding to climate change.

As co-conveners of the E15 Expert Group, we are convinced of the need to provide organized and structured input into the policy and governance debates on the global trade system and clean energy technologies. The policy options that have resulted from this thought and dialogue process are offered to policy-makers and stakeholders alike, in the hope that they provide paths to effectively respond to policy imperatives of societies the world over. In a second phase of the E15 Initiative, we intend to engage policy-makers in advancing these options.

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Mitigation efforts to limit global temperature rise to no more than 2 degrees Celsius as compared to pre-industrial levels will primarily hinge on a scale-up of clean energy. The December 2015 UNFCCC Paris Agreement on climate change is fundamentally about fostering a rapid and massive transformation to a low carbon or carbon-neutral energy base for the world economy.

The spectacular growth of CETs over the past two decades has largely occurred in response to purposeful international, national, and subnational policies. The result is today’s dynamic clean energy industry, encompassing manufacturing, services, and knowledge, mostly organized in global value chains and highly dependent on international trade and investment. However, the lack of coherent and coordinated trade and investment governance frameworks has resulted in many barriers and obstacles that add unnecessary risks to investments, complicate the organization of supply chains, and add costs at borders and behind, all delaying the scale-up of clean energy worldwide. The growing number of trade remedy cases involving both anti-dumping as well as anti-subsidy measures add to tensions among trading partners while increasing uncertainty and exerting a chilling effect on investment.

While initiatives at the regional and plurilateral level to reduce barriers to trade in CETs have been launched, at the multilateral level the lack of a successful conclusion to the WTO’s Doha Round has for long effectively prevented the WTO from taking on new issues. December 2015 also saw action in this respect as negotiators at the WTO Ministerial Conference in Nairobi made a decision to abandon Doha’s straightjacket and freed members to pursue new issues through approaches delinked from the resolution of the round. Already, the WTO Ministerial Conference of 2011 and the Davos declaration on the Environmental Goods Agreement (EGA) speak of “the need to look at ways that may allow Members to overcome the most critical and fundamental stumbling blocks.”

It is against this backdrop that the E15 Expert Group on Clean Energy Technologies and the Trade System was established, jointly convened by ICTSD with Friedrich Ebert Stiftung and Chatham House in partnership with the World Economic Forum. The objective of the Expert Group was to explore the major challenges and opportunities for expanding the use of CETs through trade, and examine the ways in which current trade policies and frameworks enable
or constrain the development of clean energy. Based on this analysis, the Group’s mandate was to develop policy options for the global trade system to enable the energy transition and support the scale-up of CETs in response to the climate change imperative.

BACKGROUND TO TRADE GOVERNANCE IN CLEAN ENERGY

RATIONALE FOR TREATING CLEAN ENERGY DIFFERENTLY AND FOR TAKING ACTION

With the challenges of access to energy, energy security, and climate change becoming more pronounced in recent years, there is now an agreed urgency—to phase out the use of fossil fuels, reduce energy intensity, and shift to a cleaner energy mix, making reform of the supply and use of energy a high priority for the global community. As countries strive to accomplish the shift to clean energy—often in combination with other goals such as generating domestic employment and revenue—a range of policies and measures have been put in place, some of which have trade implications. Currently, there are no energy-specific rules or commitments in the WTO, nor any structured discussion in the organization on issues related to renewable energy. There are rules pertaining to energy and to CETs in other structures of trade and investment governance, most notably in the context of the Energy Charter or in bilateral and regional trade agreements (RTAs). Research indicates that a supportive framework of rules as well as targeted trade and investment arrangements could contribute to fostering the scale-up of renewable energy. Given the considerable potential benefits in terms of sustainable development, and particularly the implications for climate change mitigation, this avenue should be fully explored and sustained.

VISION—WHERE DO WE NEED TO GO?

A prosperous, sustainable, and inclusive future must build on a low or carbon-neutral economy. Measures for clean energy expansion required to meet the goal of limiting global warming to below 2 degrees Celsius must be supported rather than constrained by governance frameworks, including trade rules or trade-relevant policies. Whereas due consideration must be given to other important national policy objectives, such as poverty alleviation, economic development, and employment creation, synergies must be sought so that clean energy is allowed to be the engine of growth as well as the solution to climate change.

TRENDS IN CET SCALE-UP AND THEIR RELATION TO POLICIES

Investments are surging into CETs. Global investment in renewable power and fuels (excl. large hydro projects) amounted to US$270.2 billion in 2014, 17% higher than in 2013 and a significant jump from $40 billion a decade earlier. Developing countries also saw a rise in investments over 2013 by 36% to $131.1 billion. Despite this growth, wind, solar, biomass and waste-to-power, geothermal, small hydro, and marine power are estimated to have contributed just 9.1% of total world electricity generation in 2014. Clearly, the scale-up of renewables will need to further accelerate to have a meaningful impact on mitigation targets.

Patenting activity in CETs has surged. There is clear evidence that patenting activity in CETs is growing. Patenting rates (patent applications and granted patents) in selected CETs have increased at roughly 20% per annum since 1997, thereby outpacing the traditional fossil fuel and nuclear energy sources. The surge in CET patenting activity coincided with the adoption of the Kyoto Protocol, which provides a strong signal that political decisions setting adequate frameworks are important for stimulating the development of CETs.

Trade flows in CETs are dominated by a select group of countries and trade remedy action is rising. The original group of 14 countries that initiated negotiations on the EGA make up a significant portion of trade in a number of CETs.1 At the same time, growth in trade has been accompanied by a rise in the use of trade remedies (both anti-dumping and countervailing duties) against what is perceived as unfair dumping or subsidization. The WTO has also seen disputes on local content measures whose use in the CET sector appears to be rising despite WTO rules prohibiting their use. Trade remedy and local content measures increase the price
Many of the policy options are motivated by the wish to refrain from unnecessarily relying on the WTO’s dispute settlement mechanism to define the limits on how climate action is allowed to interfere with trade and vice-versa.

of CET equipment, leading to price rises in power generation and a dampening effect on investment. On the other hand, many view the clean energy sector as a “new frontier” with opportunities to build a manufacturing base and generate jobs, but which also requires some degree of protection or non-compliance with WTO rules as they exist.

What appears clear is that there is a high degree of correlation between the countries that are among the biggest greenhouse gas emitters, the biggest traders, the biggest destination for clean energy investments, and those most involved in trade disputes in the clean energy sector. From a governance perspective, the intertwining of similar actors implies that action by a select number of countries both in the climate sphere and the trade policy sphere could make a big difference to the prospects of clean energy scale-up.

WHY LITIGATION DOES NOT WORK

One option to address gaps and resolve a lack of clarity in trade rules is through litigation. However, the purpose of litigation in the WTO context is “to preserve the rights and obligations of Members under the covered agreements” rather than to attempt to change the rules. Moreover, litigation does not offer clarity and long-term predictability to the market, as WTO rulings are case specific. Litigation also involves time delays and may not respond flexibly to the needs of a dynamic and fast-evolving CET market and investment landscape. Consequently, it may not form a solid foundation of governance for the massive scale-up of CETs. In the event of slow momentum in negotiations as well as the drawbacks of litigation, the interpretation of rules through WTO committees or negotiations carried out through ad hoc or sectoral processes could emerge as a more realistic option for reform. Members of the Expert Group have therefore argued that litigation is not necessarily a preferred route forward, in particular as the rules that the panels interpret in litigation were drafted long before climate change was on the agenda. Indeed, many of the policy options are motivated by the wish to refrain from unnecessarily relying on the WTO’s dispute settlement mechanism to define the limits on how climate action is allowed to interfere with trade and vice-versa.

TRADE POLICY OPTIONS TO SUPPORT CLEAN ENERGY SCALE-UP

A first set of options attends to systemic issues with a view to enhancing trade governance for renewable energy and climate policies in the context of the WTO framework. A second set of options addresses reform of existing WTO rules and the formulation of new rules and agreements aimed at strengthening markets for CETs as well as responding to the need for any additional policy space that may be required to pursue mitigation and other sustainable development goals through the scale-up of clean energies.

OPTIONS FOR ADDRESSING SYSTEMIC ISSUES

The WTO agreements, particularly the General Agreement on Tariffs and Trade (GATT), were drafted long before climate change was high on the agenda of policy-making. There is no specific mention of the challenge in the texts. Any policies and measures implemented for climate change reasons, with possible trade implications, therefore have to be justified largely on the general exception clause of the GATT, Article XX. In addition, the general exception clause of the General Agreement on Trade in Services (GATS), Article XIV, provides a similar right of adoption of measures affecting trade in services to protect human, animal, or plant life or health. The Expert Group studied several options for enhancing policy space for clean energy and climate policies in the context of the WTO framework. These systemic options vary in their degree of challenges in terms of ease of implementation.

POLICY OPTION 1 – An amendment of GATT rules

This ambitious measure would seek to ensure that policies supporting the development and scale-up of clean energy for climate change mitigation purposes are more explicitly permissible and thus sheltered from challenge. The amendment rules appear in Article X of the WTO’s constitution, the Marrakesh Agreement establishing the WTO. A negotiated amendment, while providing legitimacy not present in a litigated settlement, would require consensus among WTO members on the need for reform as well as a two-thirds-majority agreement.
on any new text. The process could take several years and run the risk of creating parallel rules, as it would only bind those members that have accepted it.

**POLICY OPTION 2 – Temporary waivers**

The introduction of temporary waivers, which could be coupled with an amendment, would authorize discriminatory measures based on climate change concerns and legally waive the application of a stated WTO obligation. Waivers are governed by Article IX:3 and IX:4 of the Marrakesh Agreement. However, they would similarly face difficulties and delays in securing broad agreement among WTO members.

**POLICY OPTION 3 – An interpretative understanding**

This is provided for under Article IX:2 of the Marrakesh Agreement. Such multilateral interpretations are meant to clarify the meaning of existing obligations rather than to modify their content. The legal status of an understanding is that it shall be “taken into account” when interpreting a treaty. Any proposal for an understanding must first be recommended by the council overseeing the relevant agreement, which requires consensus. While also challenging, there are successful precedents regarding interpretative understandings that have influenced dispute settlement.

**POLICY OPTION 4 – A plurilateral agreement**

An option that would not require the same degree of consensus and may be easier to achieve would be a plurilateral agreement between a subgroup of WTO members regarding how they will interpret WTO rules in trade relations with each other. However, the impact of such an approach would depend both on its scope and whether its parties include important players in the WTO. A number of group experts also advocated the idea of plurilaterals outside the trade system in the form of “climate clubs” involving major greenhouse gas emitting countries. These experts consider a general exception to the most-favoured-nation (MFN) clause allowing such clubs to be a simpler pathway to pursue urgent climate goals as compared to the difficulty of amending several WTO provisions.

**POLICY OPTION 5 – A moratorium on dispute settlement**

A moratorium in the area of clean energy could be considered in view of the risks and unpredictability of WTO litigation. The moratorium would permit temporary breaches of WTO rules by members in the interest of climate change mitigation. While more feasible than an amendment of WTO rules, it would raise issues of coherence—i.e. if members recognize that certain measures may be necessary for climate change purposes, should it not be possible to make them compatible with WTO rules?

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**OPTIONS FOR REFORM OR NEW RULES**

**STRENGTHENING MARKETS**

Trade reform can take the shape of market access liberalization involving the removal of import tariffs and non-tariff measures for CETs as well as the scheduling of new market access commitments for clean energy services. Addressing issues related to domestic services regulation can further strengthen markets. The need to avoid technological lock-in is important. Policy initiatives should encourage the adoption and dissemination of new technologies as they evolve.

**POLICY OPTIONS 6 TO 9 – Tariff liberalization under different scenarios**

Reducing tariffs on clean energy goods is highly relevant in a world of fragmented production and value chains across jurisdictions. It is a tangible measure that countries could undertake to facilitate a scale-up of CETs. Given that multilateral negotiation in this area under the Doha mandate on environmental goods and services (EGS) has, to date, been largely unsuccessful, the Expert Group focused on options to make progress in effective plurilateral frameworks.

- **The Environmental Goods Agreement.** The EGA is an option within reach in the area of CETs and trade. This agreement builds on the Asia Pacific Economic Cooperation (APEC) 2012 agreement to reduce applied tariffs on a list of 54 environmental goods. The EGA parties include a majority of the main trading economies in many relevant environmental goods. The agreement will only be finalized as WTO-compatible once a critical mass threshold is reached, and the intent is to extend the benefits accruing from the initiative on an MFN basis.

Reducing tariffs on clean energy goods is highly relevant in a world of fragmented production and value chains across jurisdictions. It is a tangible measure that countries could undertake to facilitate a scale-up of CETs.
Trade in services plays a critical role in the deployment of clean energy and is a major input in clean energy projects. It is thus crucial to address clean energy services in a trade context.

For the agreement to be significant for climate mitigation purposes, it is crucial that that all goods relevant to CETs are included, which would imply an increase in current product coverage.

- **A Sustainable Energy Trade Agreement (SETA).** A plurilateral approach such as a SETA, negotiated inside or outside the WTO, would more directly target CETs than the EGA. It is also envisioned as a comprehensive plurilateral agreement, addressing a vast range of policies and barriers beyond tariffs, such as services restrictions and non-tariff measures. The outcome and impact of a SETA for the scale-up of CET would therefore be more significant than the EGA. However, it would be more challenging to negotiate.

- **The benefits of a multilateral setting.** Another option would be to build on the EGA and to make it as effective, comprehensive, and inclusive as possible. Many developing economies, currently largely outside the EGA, are expected to see their energy demand grow significantly. At the same time, they are committed to increasingly contribute to mitigation action. It is thus important that their shift to a cleaner energy mix is facilitated through all possible means, including through trade policy. Two areas require further analysis: developing a mechanism that would make it easier for countries outside the EGA to join; and including some form of special and differentiated treatment in the EGA to address developing country concerns.

- **Lessons and options from RTAs.** Several aspects regarding CETs and trade governance are being innovated in RTAs. Valuable lessons, including in the area of non-tariff measures, could be drawn from provisions in recently concluded RTAs. Notable examples include: (i) the EU-Singapore Free Trade Agreement, which contains provisions unprecedented in other agreements (e.g. on Prohibited Subsidies) and a chapter on sustainable energy with commitments on Non-Tariff Barriers to Trade and Investment in Renewable Energy Generation; and (ii) the Trans-Pacific Partnership (TPP) Agreement, with commitments to eliminate tariffs on environmental goods, facilitate trade in environmental services, and work towards addressing non-tariff barriers on these products and services. The TPP also contains soft provisions on the Transition to a Low Emissions and Resilient Economy. The Transatlantic Trade and Investment Partnership (TTIP) between the US and the EU is also an interesting mega-regional as it would theoretically be able to set the bar high and make progress on regulatory cooperation in relation to climate change and clean energy.

**POLICY OPTIONS 10 TO 13 - Removing barriers to clean energy services**

Trade in services plays a critical role in the deployment of clean energy and is a major input in clean energy projects. It is thus crucial to address clean energy services in a trade context. An interesting development is the launch of negotiations on a Trade in Services Agreement (TiSA), which may offer a promising venue to achieve progress in the area of clean energy using a plurilateral approach.

- **Identification of services relevant for the supply of CETs.** Clean energy services lack an appropriate, universally agreed classification. Action should be taken to address this gap. A scoping exercise that helps countries better understand the coverage of products and activities relevant for the supply of CETs is a prerequisite for negotiating commitments. Such an exercise could take place in the Council for Trade in Services under the WTO. Alternatively, it could evolve within TiSA and take the form of a negotiating proposal. This could lead to a document that sets out the different activities or services subsectors whose liberalization could aid in the development and optimal use of clean energy.

- **Implementation of reforms.** A next step would be to engage in actual trade reform. If a critical mass of countries were prepared to make commitments, it would be appropriate to try and negotiate an agreement incorporating definitions as identified in the scoping exercise. If only a smaller group of countries opt to make commitments, it may make more sense to incorporate the definitions as laid out in their individual schedules of commitments.

- **Establishment of a plurilateral track.** The above initiatives and reforms could take place in a plurilateral setting. This may enable a more expeditious outcome, with potentially greater coverage than would be possible under a multilateral process. Given the more flexible approach to services negotiations traditionally, it would still be possible for new entrants in a future agreement to make appropriate commitments relative to their respective domestic conditions.
Coordinated approach to clean energy goods and services liberalization. If countries choose to pursue a plurilateral approach to trade in clean energy services, a recommendation would be to liaise closely with the EGA negotiations on tariffs. Clean energy goods and services are often provided in an integrated manner. Coordination will result in a more coherent outcome. Fully integrating services negotiations as part of the EGA would be an even better option, thereby turning it into a green technologies agreement. In this scenario, strong coordination with TISA would be necessary, as the latter could involve negotiations on services relevant to clean energy delivery.

POLICY OPTIONS 14 TO 17 – Addressing regulatory issues

In addition to policy initiatives undertaken unilaterally, plurilaterally, or regionally, certain reforms will need to take place under the WTO. Examples include: non-tariff measures in clean energy, particularly standards and conformity assessment; clarifying the extent to which private sector standards can be disciplined; and domestic regulation in services. Discriminatory regulatory measures may not only inhibit the supply, transmission, and distribution of renewable energy, but also the foreign suppliers who are intent on investing in and providing those services. At the same time, space will need to be preserved to address legitimate domestic regulatory concerns of WTO members.

To meet climate goals, large amounts of clean energy must be able to connect to networks, including for the purpose of cross-border trade in energy. Regulation of access on reasonable terms to transport and distribution networks will thus be crucial for the integration of clean energy trade into an economy. The following proposals concern clean energy access to infrastructure and networks, and the implications for WTO reform, particularly general rules linked to the GATS with possible specific provisions covering preferential access for clean energy.

Additional clean energy access commitments, either in an annex to the GATS on energy services or a reference paper. These could be used to clarify and develop rules that address competition issues and third party access to fixed infrastructure (similar to the additional disciplines for the telecommunications sector). It should further be envisaged to explicitly allow governments to provide preferential grid access to clean energy on a non-discriminatory basis between domestic and foreign suppliers. In addition to general provisions to this effect in an annex to the GATS or reference paper, this could be achieved through the inscription of corresponding services in the WTO members’ schedule with a listing of respective conditions and qualifications.

Transit rules for cross-border clean energy trade. General transit rules through fixed infrastructure (such as grids) are not as complete as they should be to address all pertinent problems faced by cross-border clean energy trade. For greater clarity and predictability, it could be envisaged to adopt an interpretative note to Article V of the GATT, clarifying that transit disciplines cover electricity transit via fixed infrastructure. Similarly, it should be possible to clarify that the obligation for a member state to guarantee freedom of transit applies in any case, regardless of who owns the transportation infrastructure.

A plurilateral approach to clean energy trade through fixed infrastructure. Another option would be to address the issues related to energy trade through fixed infrastructure in a separate agreement devoted to clean energy trade under the auspices of the WTO, including in a plurilateral setting such as the proposed SETA.

The expansion of network capacity. Beyond third party and preferential access rules, a more difficult matter is linked to the creation of new infrastructure. Rules for the expansion of network capacities and the construction of new infrastructure are necessary for the development of clean energy trade and investment. The WTO framework does not contain investment disciplines; yet such disciplines appear necessary to effectively advance the construction of fixed infrastructure required for clean energy trade.

Discriminatory regulatory measures may not only inhibit the supply, transmission, and distribution of renewable energy, but also the foreign suppliers who are intent on investing in and providing those services.

It is important to bear in mind whether the achievement of climate mitigation goals would be constrained or facilitated by the adoption of policy space, and also if they could be pursued in the most effective manner without sacrificing domestic economic and social policy objectives.
POLICY SPACE BEYOND TARIFFS

Non-tariff measures constitute important barriers to trade in many cases, and particularly in the realm of clean energy. The CETs in this paper refer to those required for the provision of electricity where the sector competes with fossil fuels, which continue to benefit from considerable consumer and producer subsidies in countries at all levels of development. The clean energy sector itself receives different kinds of subsidies and assistance, both to compensate for fossil fuel support but even more to bolster the development of a sector that is in need to grow, mature, and eventually become a viable alternative to fossil energy. While reducing barriers to market access for CETs is crucial for optimizing supply chains, governments often wish to retain a degree of policy space to pursue various goals related to sustainable development. These include not only climate change mitigation but also the generation of green jobs, domestic industrial development, and technology transfer. In all of these discussions, it is important to bear in mind whether the achievement of climate mitigation goals would be constrained or facilitated in any way by the adoption of such policy space, and also if they could be pursued in the most effective manner without sacrificing domestic economic and social policy objectives. The Expert Group proposals concern three areas related to domestic policy space and associated measures that could benefit from greater clarity as well as “flexibility” with respect to trade rules: subsidies, local content requirements (LCRs), and trade remedies.

The most ambitious measure would be an amendment of the ASCM, and/or Article XX of the GATT, to ensure that policies supporting the development and scale-up of clean energy for climate change mitigation purposes would be more explicitly permissible and sheltered from challenge.

POLICY OPTIONS 18 AND 19 – Subsidies

There is a need for some sort of reform in the area of subsidies and the WTO Agreement on Subsidies and Countervailing Measures (ASCM); on the one hand to ensure that governments have the necessary policy space to support the development of clean energy, and on the other to further discipline the use of support that may be trade distortive. The recent Canada-Renewable Energy/FIT case to some extent provided shelter for certain non-discriminatory support policies, but it did not offer full immunity. As stated, group members argue that a case law solution has inherent limitations. A number of alternatives to litigation exist. These range from the very ambitious to options that may offer temporary and/or partial solutions, involving a lower level of political compromise.

The most ambitious measure would be an amendment of the ASCM, and/or Article XX of the GATT, to ensure that policies supporting the development and scale-up of clean energy for climate change mitigation purposes would be more explicitly permissible and sheltered from challenge. This option is discussed supra under systemic issues and the difficulties recognized. Another option, also outlined above, would be an interpretative understanding, which could, for example, resolve the ambiguity regarding the question of whether the general exception clause under Article XX of the GATT applies to the disciplines in the ASCM.

■ An interpretive understanding of the ASCM. An alternative approach could be an interpretative understanding to offer clarification on the concepts of “benefit,” “financial contribution,” and “specificity” in the ASCM. In the case of specificity, the understanding could define what would be acceptable as “objective criteria or conditions” in the context of clean energy subsidies. An understanding could also help clarify whether a feed-in tariff constitutes a financial contribution. On the issue of benefit, the understanding could build on the ruling of the Appellate Body in the Canada-Renewable Energy case, and include principles that would state that the determination of benefit requires a comparison against an appropriate market benchmark, which should be different than conventional energy markets. Measures targeted at addressing the cost difference between producing clean energy and conventional energy should be presumed not to confer a benefit.

■ A waiver from the ASCM. Another option is a waiver for existing clean energy policies (similar to policy option 2). A waiver could apply to subsidies specifically addressing environmental externalities and made conditional on the removal of discriminatory aspects of policies within a set, relatively short time frame. It could further contain an Article XX chapeau-like provision, requiring that policies under the waiver do not constitute arbitrary or unjustifiable discrimination. To benefit from the waiver, a WTO member could be required to eliminate or reform other policies that undermine the objectives on the basis of which the waiver is granted, in particular fossil fuel subsidies.
POLICY OPTION 20 – Local content requirements

Despite weak evidence concerning the environmental benefits of LCRs, as well as their incompatibility with WTO rules, they are prevalent around the globe. At a time of rising foreign direct investment in the CET sector, the issue will need to be addressed as a priority. It is important to review and clarify existing WTO rules. Proposals such as a gradual phasing out of LCRs were explored but found little support in the Expert Group.

- An interpretative understanding of the ASCM. An option would be an interpretative understanding of the ASCM to facilitate the conversion of ASCM-inconsistent LCRs into other kinds of WTO-consistent measures. An example would be to presume that clean energy subsidies conditional on providing benefits to the economy, such as training or hiring local workers and technology transfer, would be presumed to be consistent with WTO rules provided they are non-discriminatory and do not violate MFN treatment.

POLICY OPTIONS 21 TO 26 – Trade remedies

It is estimated that over the period 2008–12, trade remedies affected $32 billion worth of trade in green products, thus causing an annual reduction in trade of about $14 billion and a trade loss of $68 billion over a five year period (the duration of trade remedies). The Expert Group identified an overarching option to tackle this problem, which involves a long-term agenda for reform of WTO rules, as well as specific proposals to be pursued in the near term.

- Reform of the WTO rules governing anti-dumping and anti-subsidy measures. The objective would be to achieve a better alignment with normal competition or antitrust rules. This would involve, inter alia, revision of the definition of abuse of dominant position and of dumping so that the rules specifically target anticompetitive behaviour (rather than simple price discrimination). It would also include addressing some of the more common procedural weaknesses such as product definition, the identification of indicators of injury, and verification of causality between dumping or subsidization and injury. It would also be desirable to: (i) include a “public interest test,” which would require input from a broader range of stakeholders than is the case today; and (ii) consider the inclusion of environment-specific provisions in the agreements.

- Enforcement of existing laws. This includes, for instance, current WTO anti-dumping provisions that in effect require recognition in dumping calculations of “Moore’s law” on learning curves and cost reductions over a product life cycle.

- Trade remedy limits and national public interest tests. Other short-term options involve: making use of the lesser duty rule to limit the level of trade remedies on clean energy; introducing a time limit for trade remedies on clean energy; limiting the scope of trade remedies, for example by only permitting measures on a certain number of clean energy products or a certain import value; and introducing a criterion on climate change in national public interest tests. These options could be applied under the WTO, unilaterally, and/or within the context of RTAs or a sectoral agreement such as the EGA.

- A peace clause on trade remedies in the clean energy sector. Significant trade chilling effects of remedies occur already at the stage of initiation of an investigation. It is thus desirable to identify options that would prevent cases from even starting. A peace clause could be introduced among a group of like-minded countries, for example in the EGA or in the TPP and TTIP. This would go a long way towards addressing the global problem of remedies in the sector, as EGA signatories and TPP parties are among the primary users of trade remedies in clean energy. Within the EGA or other trade agreements, it would also be possible to envisage simply eliminating the trade remedy tool.

- Preventing the initiation of trade remedy cases. Other options include: an undertaking by willing WTO members to engage in consultations as soon as they are aware that policies and practices in another member may give rise to trade remedy action in their jurisdiction; and a commitment to publish an objective study of the costs and benefits of both the measures being responded to by trade remedies as well as the remedies themselves.

- A provision of “non-use” of trade remedies. In a longer-term perspective, WTO members could also consider including a provision of “non-use” of trade remedies in a future WTO agreement on environmental goods, as provided for in the Doha declaration, para 31 (iii).

Significant trade chilling effects of remedies occur already at the stage of initiation of an investigation.
CONCLUDING NOTE

The policy options are listed in the summary table, structured over a short to long-term time horizon. The latter include ambitious proposals for comprehensive reform of the trade system to enable the energy transition and support the sustained scale-up of CETs, whereas the former offer a gradualist and potentially more feasible approach in the near term to respond to the urgent imperative of climate change mitigation and other sustainable development goals.

The Paris Agreement commits signatory nations to reductions in greenhouse gas emissions with the objective of limiting global warming to “well below” 2 degrees Celsius. The new framework places the burden of action on the implementation by individual nations of respective Nationally Determined Contributions. Most plans for transitioning to a low emissions economy refer to ambitious targets to shift energy matrixes through a rapid and massive deployment of clean energy. As argued, an enabling framework of rules as well as targeted trade and investment arrangements can greatly contribute to fostering the necessary scale-up of clean energy globally.

The policy options paper produced by the E15 Expert Group on Measures to Address Climate Change and the Trade System underlines that “most of the opportunities trade offers in the common struggle against climate change are currently being missed. The effort to address climate change must occur not only within the UNFCCC; it must also occur within the global trade system. There are a whole array of ways the WTO and other trade arrangements can be used affirmatively to maximize trade as a positive force in fighting and forestalling climate change.”

In offering a broad set of options for consideration by policy-makers and other stakeholders in developed and developing countries alike, the E15 Expert Group on Clean Energy Technologies has sought to contribute to this effort.

Endnote

1. The original EGA parties are Australia; Canada; China; Costa Rica; the European Union (and its 28 member states); Hong Kong, China; Japan; Korea; New Zealand; Norway; Singapore; Switzerland; Chinese Taipei; and the United States.
Most plans for transitioning to a low emissions economy refer to ambitious targets to shift energy matrixes through a rapid and massive deployment of clean energy. An enabling framework of rules as well as targeted trade and investment arrangements can greatly contribute to fostering the necessary scale-up of clean energy globally.
### Options for addressing systemic issues

- **Short-term Options:**
  - A moratorium on dispute settlement in some or all areas of climate change mitigation based on agreement with trading partners including those whose trade could be impacted by such measures.

- **Medium-term Options:**
  - A plurilateral agreement between a subgroup of countries regarding how they will interpret WTO rules in trade relations with each other.

- **Long-term Options:**
  - An amendment package coupled with a waiver with respect to WTO rules on the grounds of policy space required for climate change mitigation and based on Article IX:3 and IX:4 of the Marrakesh Agreement.

  - An interpretative understanding, as provided for under Article IX:2 of the Marrakesh Agreement. Such multilateral interpretations are meant to clarify the meaning of existing obligations, rather than to modify their content.

### Options for reform or new rules

#### Strengthening markets: tariffs

- Establish a list of environmental goods that includes all key clean energy goods in the context of the EGA and eliminate bound tariffs to zero.
- Finalize the DDA on EGS.

#### Strengthening markets: services & regulatory issues

<table>
<thead>
<tr>
<th>Short-term Options</th>
<th>Medium-term Options</th>
<th>Long-term Options</th>
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<tbody>
<tr>
<td>Ensure coordination between the EGA and TiSA for a coherent approach to CETs.</td>
<td>Promote a discussion under the WTO Committee on Trade and Environment about identifying services relevant to the supply of CETs.</td>
<td>Addressing the issues related to energy trade through fixed infrastructure in a separate agreement, including a plurilateral one, under the auspices of the WTO devoted to energy trade (such as a Sustainable Energy Trade Agreement).</td>
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<td>Propose a mechanism that would make it easier for countries outside the EGA to join.</td>
<td>Include some form of special and differentiated treatment in the EGA to address developing country concerns.</td>
<td>Additional commitments either in an annex to the GATS on Energy Services or a Reference Paper to address competition issues and third party access to fixed infrastructure including priority access for clean energy to the networks whether exported / imported or domestically produced and consumed.</td>
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<td>Include clean energy services in the EGA.</td>
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<td>Formulation of WTO investment disciplines to effectively address the construction of fixed infrastructure necessary for clean energy trade.</td>
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<tr>
<td>Strengthening markets: services &amp; regulatory issues</td>
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<tr>
<td>Work towards the inclusion of services relevant for CETs in TISA, and for an eventual inclusion of TISA under the WTO.</td>
<td>Agree to an understanding or an annex to the GATS on clean energy services, similar to the annex on telecommunications.</td>
<td>Address domestic regulations in the area of clean energy services under the WTO.</td>
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<tr>
<td>Ensure coordination between TISA and the EGA on goods for a coherent approach to CETs.</td>
<td>Address domestic regulations in the area of clean energy services under the WTO.</td>
<td>Revisiting the application of WTO transit rules with respect to energy.</td>
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<td>Promote a discussion under the WTO Committee on Trade and Environment about identifying services relevant to the supply of CETs.</td>
<td>Countries make reform commitments reform based on the understanding or annex under TISA or the GATS.</td>
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<td>Countries make reform commitments reform based on the understanding or annex under TISA or the GATS.</td>
<td>Interpretative note to GATT, Art. Y, clarifying that transit disciplines cover electricity transit via fixed infrastructure and that the obligation for a member state to guarantee freedom of transit applies in any case, regardless of who owns the transportation infrastructure.</td>
<td>Addressing the issues related to energy trade through fixed infrastructure in a separate agreement, including a plurilateral one, under the auspices of the WTO devoted to energy trade (such as a Sustainable Energy Trade Agreement).</td>
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<tr>
<td><strong>Policy space: subsidies &amp; local content requirements</strong></td>
<td><strong>Policy space: trade remedies</strong></td>
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<td>An interpretative understanding to clarify concepts in the ASCM such as “benefit”</td>
<td>Eliminate trade remedies in RTAs and/or the EGA.</td>
<td>In concluding the Doha negotiations on environmental goods, insert a provision on</td>
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<td>, “specificity” and “financial contribution” as well as for example the relationship</td>
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<td>the “non-use” of trade remedies.</td>
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<td>between GATT Article XX and ASCM.</td>
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<td>Reform WTO rules on trade remedies in general (i.e. beyond their use in clean energy).</td>
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**Policy space: trade remedies**

- **A better enforcement of existing law**, for example by recognizing “Moore’s law” on learning curves and cost reductions over a product life cycle.
- **An undertaking by willing WTO members to engage in consultations** as soon as they are aware that policies and practices in another member may give rise to trade remedy action in their jurisdiction.
- **Make use of the lesser-duty rule in remedy cases** in the area of clean energy; introduce a time limit for trade remedies on clean energy; and limit trade remedies on clean energy goods in scope.
- **A commitment to publish an objective study** of the costs and benefits of both the measures being responded to by trade remedies as well as the remedies themselves.
- **Introduce a climate change criterion in national public interest tests.**
- **Introduce a peace clause** on trade remedies on the clean energy sector in new RTAs and/or the EGA.
EXPERT GROUP PAPERS AND THINK PIECES

The papers commissioned for the E15 Expert Group on Clean Energy Technologies and the Trade System can be accessed at http://e15initiative.org/publications/.


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The experts all participated in their personal capacity. The analysis and policy recommendations are not attributable to any institution with which members of the E15 Expert Group are associated.
E15 INITIATIVE: EXPERT GROUPS AND TASK FORCES

In the quest for effective responses to the challenges faced by the global economy at this time, foremost experts were invited to contribute to 15 thematic groups as well as three task forces addressing horizontal issues. The groups met regularly between 2012 and 2015 with the goal of delivering a set of policy options on the occasion of the WTO’s 20th anniversary. These options are intended to animate discussions and feed the present and future international trade and investment policy agenda for sustainable development. The full volume of policy options papers, jointly published by ICTSD and the World Economic Forum, and launched at the Forum’s Annual Meeting in Davos-Klosters in 2016, is complemented with a monograph that consolidates the options into overarching recommendations for the international trade and investment system for the next decade. The second phase of the E15 Initiative in 2016–17 will see direct engagement with policy-makers and other stakeholders to consider the implementation of E15 policy recommendations.

E15 INITIATIVE THEMES

1 – Agriculture and Food Security
2 – Clean Energy Technologies
3 – Climate Change
4 – Competition Policy
5 – Digital Economy
6 – Extractive Industries
7 – Finance and Development
8 – Fisheries and Oceans
9 – Functioning of the WTO
10 – Global Trade and Investment Architecture*
11 – Global Value Chains
12 – Industrial Policy
13 – Innovation
14 – Investment Policy
15 – Regional Trade Agreements
16 – Regulatory Coherence
17 – Services
18 – Subsidies

* Policy options to be released in late 2016
 Implemented jointly by ICTSD and the World Economic Forum, the E15 Initiative convenes world-class experts and institutions to generate strategic analysis and recommendations for government, business and civil society geared towards strengthening the global trade and investment system for sustainable development.