Harmonization of product energy efficiency standards and free trade agreements: the role of international cooperation

Jurei Yada

International Partnership for Energy Efficiency Cooperation (IPEEC) 31-35 rue de la Fédération 75015 Paris France jurei.yada@ipeec.org

Benoit Lebot

International Partnership for Energy Efficiency Cooperation (IPEEC) 31-35 rue de la Fédération 75015 Paris France benoit.lebot@ipeec.org

Zoe Lagarde International Partnership for Energy Efficiency Cooperation (IPEEC) 31-35 rue de la Fédération 75015 Paris France zoe.lagarde@ipeec.org

Ailin Huang

International Partnership for Energy Efficiency Cooperation (IPEEC) 31-35 rue de la Fédération 75015 Paris France ailin.huang@ipeec.org

Enrui Zhang

International Partnership for Energy Efficiency Cooperation (IPEEC) 31-35 rue de la Fédération 75015 Paris France enrui.zhang@ipeec.org

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Abstract

Free trade agreements (FTAs) can bring major economic gains, but can equally affect energy efficiency policies. Since FTAs most often include consideration of issues like standards, definitions, test procedures, and legal regulations dealing with energy efficiency, their impact on energy efficiency policies can be great.

A main objective of FTAs is harmonization. By aligning policies, regulations and other trade barriers, harmonization can facilitate trade, conformity assessment and policy setting comparisons. Linked to energy efficiency it can also have major effects on energy and emissions reductions, which are necessary for the 2 °C climate goal. The global CO2 savings potential from best practice policy harmonization for product energy efficiency standards, for example, is estimated at around 7 % of all energyrelated emissions from all sectors in 2030, and can thus confer energy saving, environmental and other social benefits.

The challenge is to ensure that convergence occurs around the highest level of efficiency and not the lowest, and that standards are not 'frozen' over the long-term. Yet as FTA negotiations take place outside common national and international forums that establish and implement energy efficiency polices, energy efficiency policymakers must find a way to work outside these channels to influence harmonization at the level of international best practice. International collaboration can play a big role in this by bridging the gap between the trade and energy efficiency policy spheres. This paper explores the under-recognized link between product energy efficiency standards, harmonization and FTAs, arguing that energy efficiency policymakers should actively consider FTAs as potential tools to further harmonization. It considers how increased cooperation between energy efficiency and trade officials can positively influence this process, and how dedicated international collaboration platforms can contribute to this end.

Introduction

The rapid increase of energy efficiency improvement has become a global imperative. In the world of the Paris Agreement and United Nations Sustainable Development Goals, energy efficiency can make significant contributions to fostering sustainability and reducing greenhouse gas (GHG) emissions. Estimates show that energy efficiency can account for almost a third of the GHG emissions reductions necessary by 2030 to keep global warming to below 2 degrees Celsius (2°C) (McKinsey and Company, 2009). In addition, it can bring other benefits linked to energy savings such as economic growth, energy security and improved health. Promoting and accelerating the deployment of energy efficiency is, therefore, in the interest of all countries and must be pursued using a variety of policies and policy approaches.

In this context, energy efficiency and trade emerges as an important area for consideration by energy efficiency policy-makers,¹ in particular in relation to the harmonization of product minimum energy-efficiency performance standards (MEPS).

^{1. &}quot;Policymakers" refers to government officials working on energy efficiency.

Harmonization of product MEPS can have a significant impact on energy savings and GHG emissions reductions; at the same time, harmonization is a major corollary of free trade agreements (FTAs), and so the outcomes of FTAs can greatly affect energy efficiency standards and policies. Despite this crucial link, however, the connection between product energy efficiency standards, harmonization and FTAs has not been actively considered by energy efficiency policymakers to date. This paper aims to address this gap in three ways. Firstly, it identifies free trade agreements as an area of potential action for energy efficiency policymakers, highlighting the opportunities and challenges for ensuring that MEPS harmonization occurs at the level of international best practice, not the lowest common denominator, in FTAs. Secondly, it suggests increased dialogue and cooperation between energy efficiency and trade officials as a governance-level solution to realizing MEPS harmonization at highest stringency levels. Lastly, it highlights the potential of international collaboration mechanisms as a concrete way forward, identifying institutional spaces in which cooperative platforms could operate to bridge the dialogue gap between the two policy spheres. As such, this paper hopes to make an original contribution to wider conversations on policymaking and governance, as well as those on harmonization of product energy efficiency standards and trade.

Trade continues to be an important item on national and regional agendas, despite recent waves of anti-trade rhetoric in Europe and North America, and is worth the consideration of energy efficiency policymakers. Over the past two years, the number of bilateral and regional trade agreements has risen continuously and more are currently under development, including large regional agreements such as the Free Trade Agreement for the Asia-Pacific (FTAAP), which groups together members of the Asia-Pacific Economic Cooperation (APEC) forum, and the Regional Comprehensive Economic Partnership (RCEP), which involves countries of the Association of Southeast Asian Nations (ASEAN) and their six FTA partners.² Although the Transatlantic Trade and Investment Partnership (TTIP) and Trans-Pacific Partnership (TPP) - the 'mega' FTAs for North America and Europe, and the Pacific region, respectively- are unlikely to proceed under the new U.S. administration of President Donald Trump, their demise does not spell the end of FTAs in general.3 On the contrary, political developments such as the United Kingdom's departure from the European Union are likely to trigger a rise in the number of trade agreements, as will the continued geopolitical importance of trade zones.⁴ Current drawbacks therefore should not be regarded as definitive trends, nor should trade agreements be deemed out-dated. The questions raised in this paper are relevant to policymakers for the long-term, as well as the short- and medium-terms, as they relate to future FTAs, existing agreements, and those currently under negotiation.

This paper is organized into three sections. The first section provides a general overview of product energy efficiency standards, the importance of international harmonization and its possible benefits, building the case for why policymakers should pursue harmonization at international best practice level. The second outlines the link between MEPS, harmonization and free trade agreements, identifying the inter-policy sphere dialogue gap. The final section outlines the importance of increased dialogue between trade and energy efficiency officials through international collaboration, including possible ways forward.

International harmonization of product energy efficiency standards: overview and benefits

MEPS are a set of mandatory requirements for energy-related products that limit the maximum amount of energy that can be consumed by a device for a specific task. They are applied by governments in a particular country or region and define which products can be marketed and sold based on their energy performance. MEPS – as well as related labelling programs, which identify best-performing products within an appliance category – therefore promote energy efficiency by helping market transformation toward more energy efficient technologies, and are considered one of the most important energy saving policies (IEA, 2000; Wiel and McMahon, 2005; Janssen, 2010).

MEPS and energy labels are now in place for at least one product in over 70 countries; these countries together account for more than 90 % of global gross domestic product (GDP) and 70 % of the global population (Molenbroek et al., 2015). Although significant amounts of energy have been saved through these schemes to date, however, room for large improvements remain in all economies, and these can be achieved notably through international harmonization of energy efficiency standards.

The stringency of current energy efficiency standards varies considerably across countries and regions, as do product coverage and definitions, conformity assessment and test procedures, and policy setting contexts. This means that in many areas it is possible as a whole to raise the ambition, range and rigor of end-use energy efficiency policies and regulations so that they fall in line with international best practice, generating greater energy savings. Edith Molenbroek et al. (2015) estimate that, if harmonization of MEPS at current highest requirement levels occurred globally and were implemented by 2020, it would generate gross global energy savings of 13-14 % (7,600 TWh) in 2030 compared to business-as-usual (BAU). This is equivalent to almost double the electricity consumption of the United States and 5-6 % of projected total global final energy consumption in 2030. The savings would be experienced across all countries and regions, across a wide range of product groups, and remain significant even taking into account a possible rebound effect.5

^{2.} These countries are: Australia, China, India, Japan, New Zealand and South Korea. For more information on the current state of regional trade agreements, see https://www.wto.org/english/tratop_e/region_e/regiac_e.htm.

^{3.} For information on the TTIP, TPP and future of FTAs, see for example: http:// thediplomat.com/2017/01/trump-killed-tpp-whats-next-for-trade-in-asia/ and https://www.franceculture.fr/geopolitique/ceta-ttip-ttp-les-accords-de-libreechange-reconfigurent-lespace-mondial.

^{4.} For more on the geopolitical implications of trade agreements, see for instance https://www.franceculture.fr/geopolitique/ceta-ttip-ttp-les-accords-de-libreechange-reconfigurent-lespace-mondial.

^{5.} The areas of highest relative absolute energy saving potential are listed as: consumer electronics and ICT, lighting and thermal heating, and hot water products. For further details, see Molenbroek et al., 2015 and the United Nations Environment Programme's (UNEP's) United for Efficiency website, http://united4efficiency.org/.

They would also have an important impact on GHG mitigation, with an estimated 7 % reduction of 2030 total global BAU emissions (4,450 MtCO₂e) (Molenbroek et al., 2015). The positive effects of international MEPS harmonization on energy savings and climate change mitigation are, therefore, considerable.

In addition, there are wider benefits that can be derived from harmonization of product energy efficiency standards. These include, among others: improved economic efficiency and benefits (estimated between EUR 280 to 410 billion per year globally); job creation; reduced air pollution; and enhanced energy security (Molenbroek et al., 2015; IEA, 2000; Wiel and McMahon, 2005; Janssen, 2010).⁶ Harmonization can also have a significant impact on trade. Product energy efficiency standards and regulations (including labelling) are considered technical barriers to trade (TBT) under World Trade Organization (WTO) rules⁷, which means that they can potentially limit the flow of trade in products due to differences in technical standards and requirements between markets (Shepherd, 2007). By eliminating these differences (barriers), harmonization can: better facilitate the flow of goods; reduce the costs of product testing and design (lower market entry costs); strengthen market competition; avoid the dumping of inefficient products on trading partners; and enhance prospects for trade and technology transfer (IEA, 2000; Shepherd, 2007).8

Recognizing these collective benefits, governments and energy efficiency policymakers have pursued harmonization in MEPS policies⁹ through a number of international cooperative efforts that have emerged over the last ten years.¹⁰ Examples include the Collaborative Labelling and Appliance Standards Program (CLASP)11, the International Energy Agency's Technical Collaboration Programme on Energy Efficient End-use Equipment (IEA 4E),¹² the International Partnership for Energy Efficiency Cooperation's (IPEEC's) Networked Devices Task Group (NDTG)¹³, the joint IPEEC-Clean Energy Ministerial (CEM) Super-Efficient Equipment and Appliance Deployment (SEAD) initiative¹⁴, and the United for Energy (U4E) initiative, which is led by the United Nations Environment Programme (UNEP)15. The purpose of such initiatives - which are multilateral, but can also be bilateral in nature - is to facilitate information exchange, cooperation, coordination and comparisons of policy settings in the field of energy-efficient products. Such

11. http://clasp.ngo/

approaches can help harmonization by removing uncertainty about the feasibility of attaining certain energy efficiency levels, facilitating fast-tracking of policy development through a 'follow-my-leader' effect, and reducing program costs for some countries by helping them adopt program elements from their partners (Waide et al., 2010; Janssen, 2010; IEA, 2000). In effect, they are one of the principle methods for driving international harmonization by the energy efficiency community.

Free trade agreements: implications and considerations for harmonization of product energy efficiency standards

Harmonization is not driven by energy efficiency - and to an extent, climate16 - policymakers alone, however, nor are harmonization efforts limited exclusively to their sphere. Given the trade benefits of harmonizing standards and regulations, mentioned above, harmonization is a priority for the trade community. Indeed, because lowering barriers is a key trade objective, harmonization is often regarded as the ultimate imperative of trade cooperation, pursued actively by trade officials and industry through free trade agreements (FTAs) (Sandrey, 2013; Faubert and Wood, 2016; WTO, 2012). All FTAs, to various extents, consider product standards, including definitions, test procedures, and legal regulations related to energy efficiency policies; they also determine the level at which harmonization occurs, either at the highest efficiency or a lower common denominator (Hartikainen et al., 2015). As such, the outcomes of trade agreements can have an important impact on product energy efficiency policies and harmonization.

Yet despite this important inter-relation, energy efficiency policymakers have rarely recognized the direct link between the pursuit of MEPS harmonization and the potential effects of trade agreements on this process. Indeed, in personal interviews conducted for this study, energy efficiency experts explicitly stated this lack of awareness, with a former CLASP expert noting the "energy efficiency bubble" in which energy efficiency policymakers operate (Janssen, R. 2017, personal communication, 20 February; Saheb, Y. 2017, personal communication, 21 February). That is not to say that energy efficiency product standards and trade in general have been treated completely apart, either in theory or in practice (as referred to briefly in the previous section). On the contrary, trade has featured as a consideration for energy efficiency policymakers and experts in the development and harmonization of product energy efficiency standards, although not necessarily as a primary motivation. The European Union's Eco-design Directive¹⁷, for example, arose partly to ensure that differences among national regulations in EU member states did not become obstacles to trade within the EU bloc. Policymakers have also been motivated by energy saving, environment and industry concerns "[to] broadly integrate some trade issues because they want to avoid unacceptably inefficient equipment from entering their country or region... and they want to benefit from globalization, given that the manufacturing of energy-using products has moved to

^{6.} These benefits are greater if global harmonization were to occur, but are still present in lesser forms at national and regional levels.

^{7.} The specific agreement in question is the WTO Agreement on Technical Barriers to Trade. TBTs come under non-tariff barriers to trade (NTBs).

^{8.} The impact of harmonizing standards and regulations on trade can differ markedly between countries, especially developing nations. See Shepherd, 2016 and OECD, 2012.

^{9.} For an overview of different national and regional MEPS programs, see Janssen, 2010.

^{10.} Industry is also an important stakeholder here. See Janssen, 2010 and Molenbroek et al., 2015.

^{12.} http://www.iea-4e.org/

^{13.} https://ipeec.org/cms/15-networked-devices-task-group-ndtg-.html. The NDTG operates through the Connected Devices Alliance (CDA), which is jointly led by the British government and the International Energy Agency (http://cda.iea-4e.org/).

^{14.} http://www.superefficient.org/.

^{15.} http://united4efficiency.org/. U4E leads the Energy Efficiency Accelerator for Appliances and Equipment of the United Nations Sustainable Energy for All (SE4ALL) initiative.

^{16.} Climate and energy efficiency aims are increasingly tied together and influence the development and harmonization of MEPS. See Janssen, 2010.

^{17.} http://ec.europa.eu/growth/industry/sustainability/ecodesign_en

lower cost countries" (Janssen, 2010, pp. 1). Furthermore, at the level of literature, various studies on MEPS and harmonization have cited their possible impact and benefits for trade.¹⁸

Rather, what has been lacking from energy efficiency policymakers is an active consideration of how trade agreements themselves can be positive or negative vectors for product energy efficiency standards harmonization,19 and what can be done to ensure that there is alignment between the final content of trade agreements and wider energy efficiency priorities. In many countries, trade negotiations are exclusively handled by trade experts, who are often unfamiliar with technical issues such as product energy efficiency standards, and little coordination or communication takes place between trade officials and other policymakers.²⁰ This expertise gap is potentially problematic because it can result in divergences between the aims of one policy community and the results of the trade agreement; for example, harmonization of product energy efficiency standards at lower levels, or the 'freezing' of standards over the long-term. Indeed, the Organisation for Economic Co-operation and Development (OECD) (2007) notes that the absence of relevant experts from trade negotiations can result in compromises that lower the ambition of certain areas of the deal, or lead to the exclusion of important considerations altogether, although of course this is not always the case.²¹ This point was similarly highlighted in one interview with an expert, who underlined the complexity of technical standards for nonspecialists (Saheb, Y. 2017, personal communication, 21 February). Given this information gap and the potential of FTAs to drive stringent MEPS harmonization, one concrete solution for action by energy efficiency policymakers is to increase dialogue and sustained cooperation with trade officials through international collaboration platforms, the better to influence the outcomes of trade agreements.

International collaboration: bridging the gap between policy spheres

IMPORTANCE OF DIALOGUE AND THE CURRENT STATE OF COOPERATION

Direct interactions and exchanges between trade and energy efficiency officials is an important method for ensuring that energy efficiency policy objectives are better understood and considered by trade officials, and vice versa. By allowing for information- and expertise-sharing, capacity-building, and improved coordination, cooperation mechanisms between the two policy communities can play a significant role in increasing dialogue, helping policymakers set priorities and potentially reconciling conflicting views that may arise in free trade negotiations. They can also aid officials in increasing coherence between trade and energy efficiency policies and support the development of efficient policy and regulatory solutions.²² In the context of product energy efficiency standards, harmonization and trade agreements, cooperation platforms can be a good first step in ensuring that harmonization efforts are pursued at the right efficiency level.²³ These views were endorsed by experts working in both fields, who stressed the need for greater exchanges between the two expert groups, including via special forums (Yamaguchi, S. 2017, personal communication, 21 February; Cosbey, A. 2017, personal communication, 24 February).

Currently, however, there is no systematic, dedicated platform for dialogue between energy efficiency policymakers on MEPS and their trade counterparts at the international level. Countries do cooperate and consult on regulatory issues through forums such as international standardization bodies, bilateral or regional regulatory cooperative arrangements (often written into trade agreements), and the WTO's Technical Barriers to Trade (TBT) Committee, which can be relevant for product energy efficiency standards and inform trade cooperation. The TBT Committee, for instance, held a thematic session on energy-efficient products and their regulations in June 2016, which brought together national trade and energy efficiency policymakers, industry representatives and experts.²⁴ This was a one-off meeting, however, and in general regulatory exchange forums divide their focus across a range of industries and areas. Similarly, at national/regional bloc level, consultations linked to countries' wider sustainable development strategies and trade agreements can involve energy efficiency stakeholders and result in information-exchange and alignment of objectives; they are however neither energy efficiency-focused nor systematic, as they are usually conducted within the context of specific FTAs. An example can be found in the consultations carried out as part of the European Union's Trade Sustainability Impact Assessments (trade SIAs), which aim to gather input from a variety of stakeholders and experts in order to determine if an FTA is beneficial for both sustainable development and trade liberalization. Access to energy-efficient and clean technologies, as well as the FTA's potential to contribute to their deployment, can feature here under assessments of the possible environmental impact of the trade agreement.²⁵ However, in addition to not being energy efficiency or MEPS-specific, these consultations serve to inform trade negotiators via the assessment itself, and so do not establish direct opportunities for dialogue between trade and energy efficiency policymakers. More promising are APEC's expert groups, namely the Sub-Committee on Standards and Conformance (SCSC) and the Expert Working Group on Energy Efficiency and Conservation (EGEE&C). The latter promotes energy efficiency in APEC economies, and the former convergence of energy efficiency regulations for ICT products. Both are regional however, and

^{18.} See for instance IEA, 2000, Waide et al, 2010, Janssen, 2010 and OECD, 2010.
19. Trade agreements as a policy instrument to further environmental aims have been increasingly explored over the years, with the Environmental Goods Agreement (EGA) being a good example. Through the EGA, there are attempts to lower tariffs for energy efficiency technologies by identifying them as 'environmental goods'. These approaches currently involve tariff measures, and not consideration of harmonization per se (non-tariff barriers). See Sugathan, 2015 and OECD, 2007.
20. For examples in the context of environmental clauses and trade agreements, see OECD, 2007.

^{21.} See Hartikainen etl al., 2015 for examples of trade agreements that have had positive effects for harmonization of MEPS policies.

^{22.} For more on the benefits of regulatory cooperation between experts, see OECD, 2007, OECD, 2016 and WTO, 2012.

^{23.} Platforms are also suggested in passing in Hartikainen et al., 2015.

^{24.} For more information on this meeting, see https://www.wto.org/english/news_e/news16_e/tbt_14jun16_e.htm $\,$

^{25.} For an example, see http://trade.ec.europa.eu/doclib/docs/2010/july/tradoc_146324.pdf.

the dialogue in the SCSC is more with regulators than government energy efficiency policymakers.²⁶

Exchanges between the two policy communities can increase in effectiveness if they are conducted more regularly and allow for sustained and dedicated discussion of MEPS policies and trade issues. One expert consulted for this study highlighted this point, noting the complexities of both trade agreements and technical standards and the number of years it could take for each side to understand the other (Saheb, Y. 2017, personal communication, 21 February). Systematic dialogue can thus ensure that officials have the extended interaction necessary to build up expertise over time, stay up-to-date on the latest research and developments in product energy efficiency standards policies and trade, and work towards an integrated understanding of each other's priorities. In addition, conducted at an international level among a diversity of countries, this kind of cooperation can offer developing countries the knowledge and experience to develop their own energy efficiency standards programs and establish links with trade policy and harmonization.27

POSSIBLE WAYS FORWARD

There are institutional mechanisms at the governance level that could accommodate such inter-policy sphere dialogue and cooperation, such as existing international collaboration platforms working on energy efficiency and energy-efficient appliances. The IEA, IPEEC and UNEP, mentioned earlier in this paper, are inter-governmental organizations with specializations in energy efficiency, and each conducts work on energy-efficient appliances, equipment and related policies. Through these organizations, national energy efficiency policymakers can decide to set up cooperative working groups with trade policymakers that meet multiple times a year specifically to discuss energy efficiency standards policies and free trade. These working groups could possibly be extended to other key stakeholders such as regulators and the private sector down the line, or involve special meetings bringing these other actors together. International standardization bodies, although also constituting cooperative platforms, do not necessarily have the same priorities with regards to driving harmonization at international best practice level and so may not necessarily present the best venue for discussion. This is because the industry voice in these bodies tends to push for harmonization at lower levels to facilitate comparability of products and trade. They are however important actors, and should be included in the wider dialogue. Other potential host-platforms for a working group on energy efficiency and trade include the OECD, which has a Trade and Agriculture Directorate and a Regulatory Policy Division under the Public Governance and Territorial Development Directorate, dealing with questions of regulatory harmonization.28

Besides providing relevant expertise and a dedicated platform, the added benefits of making use of existing international cooperative settings are the relatively low set-up costs (as the wider platforms already exist) and a stable framework for regular meetings. Indeed, as the OECD (2016) notes, "[a]s platforms for continuous dialogue, [international organizations] facilitate the development of common language and the comparability of approaches and practices...[,] provide the institutional framework and technical expertise to help countries develop international legal and policy instruments and standards... and build capacity ...". Furthermore, international cooperation between trade and energy efficiency officials can bolster domestic exchanges. One trade expert highlighted this point, stating "internal domestic dialogue between Ministries" as a necessary first step for increased coordination during trade negotiations, with a second being awareness-raising among counterparts in partner countries through capacity building and collaboration (Yamaguchi, S. 2017, personal communication, 22 February). As dialogue and cooperation between the two policy spheres improve through these working groups, cooperation can potentially be extended to areas outside of MEPS, such as energy systems, buildings, and energy efficiency best available technologies and best practices, further bridging the gap between trade and energy efficiency policymakers for the benefit of both.29

As an alternative to working groups, expert international energy efficiency organizations such as IPEEC, the IEA, UNEP, CEM and Sustainable Energy For All (SE4ALL) can also reach out to the WTO to establish closer institutional ties. Building on thematic workshops such as the one held by the TBT Committee in June 2016, this institutional rapprochement could lay the foundations for regular meetings on the topic of energyefficient appliances, harmonization and trade, including eventual production of primers and briefing documents on relevant topics for each group of policymakers. There is also potential in the new institutional space created by the EU-Canada Comprehensive Economic and Trade Agreement (CETA) through its Regulatory Cooperation Forum (RCF), the central body for regulatory cooperation under the trade agreement. This is an innovative feature in an FTA, aimed at keeping the document 'alive' and up-to-date over the years. According to Article 21.4 of CETA, the RCP will "provide a forum to discuss regulatory policy issues of mutual interest that the Parties have identified... [and] assist individual regulators to identify potential partners for cooperation activities"(European Commission, 2016a). Furthermore, Article 26.2 states that through the RCF "[e]ach Party shall ensure that... all the competent authorities for each issue on the agenda are represented, as each Party deems appropriate, and that each issue can be discussed at the adequate level of expertise" (European Commission, 2016a). Expert organizations bringing together energy efficiency policymakers can potentially make use of this framework to ensure information-exchange and dialogue with trade officials. Although the FTA is bilateral, policymakers could learn about international best practices and experiences from other countries to better inform their own policies. However, as Meyer-

^{26.} For more information on both, see http://www.egeec.apec.org/ and http:// www.apec.org/Groups/Committee-on-Trade-and-Investment/Sub-Committeeon-Standards-and-Conformance.aspx.http://www.id.undp.org/content/indonesia/ en/home/operations/projects/environment_and_energy/barriers-removal-to-thecost-effective-development-of--energy-ef.html.

^{27.} For more on potential benefits for developing countries, see Shepherd, 2007, WTO, 2012, OECD, 2007, OECD, 2010 and Janssen, 2010.

^{28.} http://www.oecd.org/tad/.

^{29.} These are areas where work streams already exist, for instance IPEEC's Energy Management Working Group (EMWG), Buildings Energy Efficiency Task Group (BEET), and Top Ten Energy Efficiency Best Practices and Best Available Technologies Task Group (TOP TENs). For details see https://ipeec.org/.

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Ohlendorf et al. (2016) observe, the RCF – which will begin a year after CETA enters into force- will not be able to adopt legally binding decisions, and the work plan has not yet been set. Nonetheless, such innovative designs in FTAs can open doors for greater inter-expert cooperation, if applied successfully and replicated in future trade agreements.

Conclusion

To conclude, the harmonization of product energy efficiency standards and policies can make an important contribution to energy savings and GHG emissions reductions, and should be pursued by energy efficiency policymakers using whatever means possible. One potential tool that has been under-recognized by the energy efficiency community is the free trade agreement. By actively considering the possible impact of FTAs on MEPS harmonization, energy efficiency policymakers can begin taking the necessary steps to try to positively influence the outcomes of free trade negotiations, thereby potentially using trade agreements as vectors for furthering product energy efficiency standards harmonization at best practice level. Given the lack of communication and coordination between energy efficiency and trade officials during FTA negotiations, this can best be achieved through sustained exchange and cooperation between the two policy spheres through international collaboration platforms.

This paper has been an initial attempt to identify and explore an area of potential importance and action by energy efficiency policymakers. Trade policies are increasingly being considered by governments as promising tools for advancing climate mitigation efforts, including energy savings, with one example being the Environmental Goods Agreement, which has focused on tariff liberalization of clean technology products.³⁰ This paper has attempted to build on such approaches and show how trade agreements can be useful tools for pursuing international harmonization of product energy efficiency standards, opening doors for possible action by government officials. Similarly, by highlighting the existing dialogue gap between energy efficiency policymakers and trade negotiators, as well as examining a potential way forward through international collaboration, this paper hopes to have raised governance-level questions that can be considered further. Although the impact of inter-policy sphere cooperation on specific trade agreements is uncertain and will be hard to determine, collaboration nonetheless constitutes a valuable first step in making sure that energy efficiency and free trade interests meet, and that MEPS harmonization can benefit from trade agreements.

References

- European Commission (2016a), "CETA chapter by chapter", Trade, European Commission website, http://ec.europa. eu/trade/policy/in-focus/ceta/ceta-chapter-by-chapter/ (accessed 27 February 2017).
- European Commission (2016b), "Regulatory cooperation in TTIP: The benefits", European Union, Brussels,

http://trade.ec.europa.eu/doclib/docs/2016/march/tra-doc_154379.pdf.

- European Commission (2010), "Trade Sustainability Impact Assessment of the Free Trade Agreement between the EU and the Republic of Korea", Commission Services Position Paper, European Union, Brussels, http://trade.ec.europa. eu/doclib/docs/2010/july/tradoc_146324.pdf.
- Faubert, Michael and A. Wood (2016), "Regulatory Harmonization in International Trade: A Categorical or Conditional Imperative?", Global Policy website, http://www. globalpolicyjournal.com/blog/26/07/2016/regulatory-harmonization-international-trade-categorical-or-conditional-imperative (accessed 3 January 2017).
- Hartikainen, Teemu, A. Meier and I. Ruostetsaari (2015), "Implications of EU-U.S. free trade agreement on MEPS-policies", *eceee 2015 Summer Study – First Fuel Now*, eceee, Stockholm, https://eec.ucdavis.edu/ files/06-24-2015-Hartikainen-2015-eceee-trade-agreement1.pdf.
- Hufbauer, Gary, and Jisun Kim (2012), "Issues and Considerations for Negotiating a Sustainable Energy Trade Agreement", ICTSD, Geneva, http://www.ictsd.org/downloads/2012/05/issues-and-considerations-for-negotiating-a-sustainable-energy-trade-agreement.pdf.
- IEA (2000), *Energy Labels and Standards*, OECD Publishing, Paris.
- Janssen, Rod (2010), "Harmonising Energy Efficiency Requirements – Building Foundations for Co-operative Action", Issue Paper No. 14, ICTSD, Geneva, http://www. ictsd.org/downloads/2010/09/harmonising-energy-efficiency-ictsd.pdf.
- McKinsey and Company (2009), "Pathways to a Low-Carbon Economy: Version 2 of the Global Greenhouse Gas Abatement Cost Curve", McKinsey and Company, New York City, http://www.mckinsey.com/business-functions/ sustainability-and-resource-productivity/our-insights/ pathways-to-a-low-carbon-economy.
- Meyer-Ohlendorf, Nils, Christiane Gerstetter and Inga Bach, "Regulatory Cooperation under CETA: Implications for Environmental Policies", Ecologic Institute, Berlin, http:// ecologic.eu/sites/files/publication/2016/2586-regulatorische-kooperation-greenpeace-ceta.pdf.
- Molenbroek, Edith, Matthew Smith, Nesen Sumeli, Sven Schimschar, Paul Waide, Jeremy Tait and Catriona McAllister (2015), "Savings and benefits of global regulations for energy efficient products: Final report", European Union, Brussels, https://ec.europa.eu/energy/sites/ener/ files/documents/Cost%20of%20Non-World%20-%20 Final%20Report.pdf.
- OECD (2016), International Regulatory Co-operation: The Role of International Organisations in Fostering Better Rules of Globalisation, OECD Publishing, Paris. DOI: http://dx.doi.org/10.1787/9789264244047-en.
- OECD (2010), "Promoting Energy Efficiency Through Trade," Joint Working Party on Trade and Environment Working Paper 11 May 2010, OECD Publishing, Paris.
- OECD (2007), *Environment and Regional Trade Agreements*, OECD Publishing, Paris.
- OECD (2005), "The Feasibility of Defining Energy-Efficient Electrical Appliances as Environmental Goods," Joint

^{30.} For more details on the EGA, see Hufbauer and Kim, 2012 and Sugathan, 2015.

Working Party on Trade and Environment Working Paper 14 April 2005, OECD Publishing, Paris.

- Sandrey, Ron (2013), "Trade negotiations for a Free Trade Agreement: a guide to general principles and requirements", Working Paper No. S13WP05/2013, Tralac, Stellenbosh, http://www.tralac.org/files/2013/06/ S13WP052013-Sandrey-Trade-negotiations-for-a-FTAguide-20130502-fin.pdf.
- Shepherd, Ben (2007), "Products Standards, Harmonization, and Trade: Evidence from the Extensive Margin", Policy Research Working Paper 4390, The World Bank, Washington D.C., https://openknowledge.worldbank.org/ handle/10986/7606.
- Stern, David I. (2005), "The Effects of NAFTA on Energy and Environmental Efficiency in Mexico", Third North American Symposium on Assessing the Environmental Effects of Trade, Commission for Environmental Cooperation, Montreal, http://dx.doi.org/10.1111/j.1541-0072.2007.00221.x.
- Sugathan, Mahesh (2015), "Addressing Energy Efficiency Products in the Environmental Goods Agreement". Issue Paper No. 20, ICTSD, Geneva, http://www.ictsd.org/sites/ default/files/research/Addressing%20Energy%20Efficiency%20Products%20in%20the%20Environmental%20 Goods%20Agreement%20Issues,%20Challenges%20 and%20the%20Way%20Forward.pdf.

- Waide, Paul, M. Scholand, Y. Saheb and L. Harrington (2010), "What Is To Be Expected and Gained from International Harmonization of Equipment Energy Efficiency Requirements?", ACEEE Summer Study on Energy Efficiency in Buildings, ACEEE, Washington D.C., http://aceee.org/ files/proceedings/2010/data/papers/2166.pdf.
- Wiel, Stephen, and James E. McMahon (2005), Energy-Efficiency Labels and Standards: A Guidebook for Appliances, Equipment, and Lighting, 2nd edition, CLASP, Washington D.C, http://clasp.ngo/en/Resources/Resources/PublicationLibrary/2005/SL-Guidebook-English.
- WTO (2016), "Standards can help to ease trade in energy efficient products and reduce CO2 emissions", News Items, WTO website, https://www.wto.org/english/news_e/ news16_e/tbt_14jun16_e.htm (accessed 10 January 2017).
- WTO (2012), "International cooperation on non-tariff measures in a globalized world", in *World Trade Report* 2012, WTO, Geneva, https://www.wto.org/english/res_e/ booksp_e/anrep_e/wtr12-2e_e.pdf.

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