ELEEP Policy Recommendations
Renewable Energy and Climate Change

Poland-Germany Study Tour
10-16 November 2013

Introduction

Ecologic Institute and the Atlantic Council of the United States co-organize the Emerging Leaders in Environmental and Energy Policy Network (ELEEP). ELEEP was created under the I-CITE project, which was funded by the European Union's External Action Service. In early 2012, the ELEEP Network was awarded additional support by the Robert Bosch Stiftung, which provided for two study tours and other events in the second half of the year. The ELEEP Network has received additional funding from the European Union under the auspices of the EU's "Transatlantic Civil Society Dialogues EU-USA 2012"; with this grant, Ecologic Institute and the Atlantic Council will conduct "The ELEEP Energy and Climate Dialogue" from January 2013 through mid-2014. In addition to a second round of funding from the European Union, the Robert Bosch Stiftung has also provided a second round of support to ELEEP through mid-2014. ELEEP is a dynamic, membership-only forum for the exchange of ideas, policy solutions, best-practices, and professional development for emerging American and European leaders working on or around environmental and energy issues. ELEEP currently has approximately 120 members, split between the US and the EU. ELEEP Members provide policy advice based on their experiences and lessons from different study tours addressing environment, climate and energy issues.

A group of eleven ELEEP members gathered in Warsaw (Poland) on 10 November 2013. The study tour lasted from 10 to 15 November 2013 with additional stops in Berlin and Hamburg (Germany). As Poland was hosting the UNFCCC climate change negotiations in Warsaw, there was an opportunity to combine in one study tour a look at climate change negotiations and the implementation of ambitious energy policy (Germany's Energiewende).

The UNFCCC negotiation process

As some of the ELEEP members did not work on the climate change negotiations, Matthias Duwe (Head Climate, Ecologic Institute) and Tim Stumhofer (ELEEP member and Senior Program Associate, Greenhouse Gas Management Institute) gave presentations to the group about the history and functioning of the UNFCCC process and discussed with them what they could expect would happen during this round of negotiations. The group spent the next two days at the Polish National Stadium, where the UNFCCC negotiations were taking place. During their time in Warsaw, the group had the opportunity to meet with members of the German and Polish delegations to the negotiations. They also gained perspective on the approach taken by non-governmental organizations through meetings with Germanwatch and the Environmental Defense Fund (EDF). Complementing the tour's focus on

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renewable energy in Germany, the group met with Andrzej Kassenberg, President of the Institute for Sustainable Development (ISD), to discuss Poland's energy future and the potential for renewable in Poland.

Understanding the German Energiewende

For the final three days of the tour, the ELEEP group traveled first to Berlin and then to Hamburg to gain an understanding of Germany's Energiewende, the challenges to its further implementation, and the myriad ways that the overarching policies are being implemented throughout the country. The group was given an overview of the national policies driving the Energiewende and the policy levers used to encourage the transformation of the energy economy through meetings with Agora Energiewende and the German Energy Agency (dena). The participants also saw the Energiewende "in action" through a series of site visits: from a single house (the Efficiency Plus House in Berlin) to a 100% renewable energy system at the local level (in the village of Feldheim, Brandenburg), to the re-imagination of a part of a city on a sustainable basis (the Hamburg IBA in Wilhelmsburg). The Hamburg Institute organized a series of meetings for the group, where they learned about the ways in which Hamburg is and is becoming a leader in renewable energy. Jan Rispens, Managing Director of the Renewable Energy Hamburg Cluster, talked about the network of businesses working on renewable energy in the city and synergies of having them in one place. Stefan Schurig, Director of Climate and Energy at the World Future Council, spoke of the advantages of citizens controlling their own energy resources and moving toward a 100% renewable energy future. Finally, Christian Maaß and Roland Schaeffer, Founding Director and Partner respectively of the Hamburg Institute, discussed the remunicipalization of the Hamburg electricity and district heating systems, which was recently approved in a referendum and will be carried out by Hamburg Energie.

Highlights of the policy recommendations

All of the ELEEP policy recommendations are reviewed by external experts and other ELEEP members during the ELEEP Assembly May 2014 in Brussels. The result of this process is a variety of eight different policy recommendation concerning the right understanding of the German Energiewende, emission reduction, financing and building up renewable power systems.

Recommendation I, II, III are dealing with the correct understanding and communication of the German Energiewende. These ELEEP policy recommendations are distributed to German politicians, policy makers and renewable energy advocates to address the challenges concerning the communication processes of the German Energiewende. For example mostly in public debate, the German Energiewende is framed by misunderstandings or wrong interpretation. The transnational dynamics and impacts of this policy are fundamental in terms of a national-scale decarbonization template for other economies, climate change diplomacy and development cooperation. Therefore ELEEP highly suggest including the full scope of challenges, successes, failures and objectives of the Energiewende.

Besides that, the Energiewende should be communicated in a better way especially to foreign audiences. It is a matter of fact that international media and press report very less and/or mostly negative/critical opinions about it. ELEEP recommends to EU and US climate and energy policy makers

on the state-level and other actors engaged in energy and climate policy transition to focus on different international audiences and languages.

ELEEP also recommend to EU and US decision-makers that misinformation about the Energiewende must be replaced by correct information via communication strategies based on nuance and persistence. Responding quickly to prejudgments and unfounded criticism can be faced by a international expert communities as they are facing the same addressing climate science critiques.

Another recommendation outcome of this ELEEP study tour contributes to deal with the new technology and process requirements of a low-carbon, renewable-centric electricity system. At the beginning of the transition, decision-makers should act flexible enough to find workable and affordable set of options (Recommendation IV). Secondly the total system costs including back-up generation costs have to be part of the debate too. Comparing technology options in today's centralized electricity systems and using the metric of levelized costs of electricity is inappropriate for a low-carbon, renewable-centric system (Recommendation V). Thirdly all laws and policies of a changing electricity grid must be set up reflected and through an adaptive process (Recommendation VI). Financing and structural designing of distribution and transmission infrastructure are mostly incompatibles. For this reason ELEEP suggest workable, socially-inclusive and affordable solutions to these problems, guaranteeing the continued upkeep of electricity infrastructure (Recommendation VII).

ELEEP study tour also shed light on GHG emission reduction and what can be done to reach a post-carbon emission level. From a bottom-up and top-down perspective price carbon is one of the best solutions. ELEEP also see opportunities to implement a carbon price system not only via the ongoing TTIP negotiations but also by bilateral negotiations between the US and the EU before unilateral ratifications (Recommendation VIII).

Recommendation I: Speak to the right people: The Energiewende is much more than Germany's domestic energy policy; program outreach should reflect the scheme's full scope

Audience: German politicians and policy makers; renewable energy advocates

Issue: The German Energiewende – like other large-scale changes to energy systems – is not just a domestic energy program, but a key part of Germany's trade, industrial, environmental, and foreign policies.

Analysis: The Energiewende is much more than "just" an energy program: it is environmental policy, social policy, and industrial policy. Likewise, the Energiewende is not strictly a domestic program: it impacts regional European power markets, is integral to international trade and economic policy, and, by serving as a national-scale template for other economies looking to "decarbonize" their electricity sectors, it is effectively a form of climate change diplomacy and development cooperation. Yet, the Energiewende discourse does not reflect this dynamism. Tailoring outreach to better speak to these program dimensions could more clearly enumerate the full scope of the Energiewende's objectives, challenges, and successes.

Recommendation II: Speak the same language: Effective outreach should identify target audiences and develop communications strategies to reach them on their own terms

Audience: EU and US climate and energy policy makers; state-level (i.e. Germany, California) policymakers engaged in energy/climate policy transitions; policy advocates; others

Issue: US and EU climate and energy policies, and those of US States and EU Member States involve significant nuance and are multifaceted. Outreach strategies and messaging must be tailored for different audiences (including foreign press) to be effective.

Analysis: Anecdotal observation suggests that international reporting on the Energiewende may cast the program in a more negative light than domestic press coverage. (This observation holds true also for the EU ETS, the Regional Greenhouse Gas Initiative, and California's AB 32 climate legislation – among other climate and energy policies.) This discrepancy is troubling, as international opinion is critical for the program to fully realize its potential. To address this disconnect, better efforts could be made to make the program more accessible to international audiences. Practically, this may include obvious steps, such as translation of key program materials into relevant languages. Subtler opportunities to close this gap also exist. For instance, taking care to understand how media in different regions may interpret specific messaging and tailoring communications to suit; or, using more resonant formats that specific audiences may better respond to, such as narratives that convey personal experiences with the program.

Recommendation III: Speak when spoken to: Swiftly respond to program criticism, but with facts and by treating seriously and opening challenges and setbacks

Audience: EU and US climate and energy policy makers; state-level (i.e. Germany, California) policymakers engaged in energy/climate policy transitions; policy advocates; others

Issue: Ambitious, new climate and energy policies need time to work, but implementers and advocates cannot let the programs "speak" for themselves. Misinformation has to be met with correct information. Yet policy implementers cannot overlook challenges and setbacks in messaging; this requires nuance and persistence.

Analysis: If insufficiently addressed, early and persistent critiques —irrespective of their veracity— can do irreparable damage to a young program. This holds true for the Energiewende, as it did previously for the Clean Development Mechanism and, in the US at least, the EU ETS. Yet, setting the record straight can be challenging, particularly when criticisms hinge on partial truths, follow seemingly intuitive logic, and are complicated to succinctly dispel. Addressing unfounded criticism before it is allowed to fester in public opinion can reduce this burden. Assembling a trusted "on-call" international network of experts capable of responding to criticisms, as has been employed in efforts to address climate science critiques,[1] may offer a fast-moving agile global mechanism to keep the public discourse on the program focused.

[1] For example the Climate Science Rapid Response team: http://www.climaterapidresponse.org/

Recommendation IV: To find cost-effective and technologically-sound flexibility options for the low-carbon, decentralized, renewables-centric electric generation system of the future, organize competition between the suite of technology/process options.

Audience: EU/US electricity market regulators; EU/US politicians and policy makers; electricity industry officials; electricity market (policy) analysts

Issue: A low-carbon, renewables-centric electricity system has technology and process requirements not present in the previous system.

Analysis: Transforming the electricity generation systems in the US and the EU from a centralized, high-carbon system to a low-carbon, decentralized, renewables-centric system requires flexible technologies and systems that are not present or robust in the current system. Effectively transforming the system will require them. As the technical solutions to develop a cost-effective electricity system delivering low-carbon, renewables-centric electricity at affordable prices are not self-evident, politicians, regulators, and policy makers are faced with a wide variety of technology and process options. They should resist the inclination to choose definite solutions at the beginning of this transition, but rather should follow a phased approach and set up an on-going competition between technological and process solutions, in order to find a workable and affordable set of options.

Recommendation V: When debating electricity generating technology options and discussing options with the public, do not focus on the levelized cost of electricity, but rather total system costs including back-up generation costs.

Audience: EU/US electricity market regulators; EU/US politicians and policy makers; electricity industry officials; electricity market (policy) analysts

Issue: The current electricity system cannot be compared to a low-carbon, renewables-centric system by using the traditional measure of levelized cost of electricity.

Analysis: While it might be fair to compare technology options in today's centralized electricity system using the metric of levelized cost of electricity, this measure is inappropriate for a low-carbon, renewables-centric system. In such a system, generation capacity of any one technology would be insufficient to meet the needs of the energy system on most days – if not every day. Rather, providing electricity will be the output of the system as a whole. Solar and wind will cover most of the demand on some days, but other system technologies, including dispatchable back-up generation capacity, long-distance transmission lines, storage capacity, demand-side management, etc., will be necessary to provide reliable, affordable electricity. Under this energy system paradigm, the appropriate points of comparison are total system costs – or total additional costs and benefits to the system – which would include back-up capacity and other flexibility measures to ensure reliability. Renewables-centric systems may or may not be less expensive than centralized, fossil-fuel based systems, but cost comparisons have to take total systems costs into account, not simply the cost of added capacity. The more variable renewable energy penetrates the system, the more it becomes important to consider the temporal profile ("when?"), the location of a plant ("where?"), and the system implications ("how?") of power

generation – all not accounted for in the traditional levelized cost of electricity. In this way, some recent discussions of grid parity for new solar and wind builds, for example, are incomplete. Not including the cost of carbon is another oversight in current comparisons.

Recommendation VI: Use adaptive policymaking and management strategies to radical changes to the electricity system. (The same holds for other systems.)

Audience: EU/US electricity market regulators; EU/US politicians and policy makers; electricity industry officials; electricity market (policy) analysts

Issue: Setting transformative market change through policy with sufficient competition and enabling adjustments and adaptation over time

Analysis: When establishing laws and policies to institute revolutionary changes to the electricity generation market (taking place in Germany, Spain, Denmark, and emerging in some US States), politicians and policy makers must set up adaptive processes to incorporate learning and be willing to make adjustments over time. No one has all the answers at any one time. Messaging about this to the public, though challenging and nuanced, must reflect this too.

Recommendation VII: Find workable and adaptive solutions to power market design and the financing of distribution and transmission infrastructure.

Audience: EU/US electricity market regulators; EU/US politicians and policy makers; electricity industry officials; electricity market (policy) analysts

Issue: Current solutions for power market design and the financing of distribution/transmission infrastructure are (mostly) incompatible with a low-carbon, renewables-centric electricity system

Analysis: While much of the initial focus on transforming electricity systems to low-carbon, renewables-centric generation has focused on types of technologies (i.e. wind, solar, biomass, geothermal) and how to incentivize their uptake (i.e. renewable portfolio standards, tax incentives, feed-in tariffs, market dynamics), these arguments were only a prelude to the real work of transforming the electricity markets. Germany, Hawaii, Spain, and other places are already demonstrating the challenges that a renewables-centric electricity system place on power market design and pricing and the financing of distribution and transmission infrastructure. These latter challenges are the real tasks of reform to a low-carbon, decentralized, renewables-centric electric generation system. Workable, socially-inclusive and affordable solutions to these problems will be necessary to realize the continued transition to a renewables-centric electricity system without bankrupting current market participants, ensuring the continued upkeep of electricity infrastructure, and encouraging flows of financing for generation and transmission systems.

Recommendation VIII: For mitigating greenhouse gas emissions, the cost of carbon should remain the focus of policies. Any price is better than no price, and directed policies are preferred over indirect policy levers.

Audience: EU and US policy makers focused on climate change; other policy makers, politicians, and policy analysts

Issue: Policies (like renewable energy promotion) that have strong public support, and could contribute to the mitigation of greenhouse gas emissions, tend to indirectly affect emissions. More effective policies will need to focus specifically on greenhouse gas emissions.

Analysis: One policy that could benefit both a top-down and bottom-up effort is a price on carbon. Previous efforts to price carbon through emissions trading have seen mixed results. German industry experienced a deflated value on carbon through the European emissions trading system based on the cap-and-trade concept, and so far efforts to bring in the Australians and other countries have not raised the price. The cap-and-trade system languished in the Senate. As a result, America lacks a national trading system and the sustainability of regional trading systems such as in the Northeast are questionable after the Midwest trading system languished. California launched its own trading system in 2013 with Northwest Canada and initial reports are positive.

Some on the right and left of American politics have touted the benefits of a price on carbon, and even European oil companies have lobbied the US Congress for such a policy. The issue of a price on carbon could be addressed by the Trans-Atlantic Trade and Investment Partnership between the US and EU. Some have noted that this new partnership agreement could be used to spur industry to use more renewable energy and to adopt more efficient standards. However, the status of climate and energy policies in these talks is unclear.

Rather, a price on carbon could be negotiated bilaterally between the US and EU, but implemented unilaterally. Compensation would be made for industry to the extent that it does not make it uncompetitive with Chinese and other emerging economy industries. Concerns about the carbon tax becoming a regressive tax, passed along to the customer would need to be addressed. The other concern would be if the emitter found it more or less expensive to reduce carbon emissions than to pay for them.