ELEEP Policy Recommendations For Energy Efficiency

UK Study Tour 13-19 April 2013

Introduction

From 14 until 19 April 2013, a group from the transatlantic Emerging Leaders in Environmental and Energy Policy (ELEEP) Network visited London and Aberdeen (Scotland) as part of a study tour on the topic of "Energy Efficiency in the UK."

On their tour, the ten ELEEP Members investigated the theme of energy efficiency in Great Britain from political, economic, and societal view points, as well as from the perspective of the energy user. The time spent in London dealt primarily with the role of political institutions from the national and international perspective. The participants visited the UK Environment Agency, the Energy Efficiency Deployment Office (EEDO), and the Department of Energy and Climate Change (DECC). A meeting with members of the Mayor's office and of the London Assembly gave an understanding of the concrete measures being taken on the city-level. Additionally, there were meetings with the non-profit organization E3G, the European Centre for Energy and Resource Security (EUCERS), and the UK Green Building Council. The group gained an international perspective on energy efficiency with a visit to Carbon Trust, which aims to expedite the transition to a low-carbon global economy.

The stop in Aberdeen gave the group an interesting insight into the Scottish perspective, as well as a look at the role played by the private sector in energy efficiency and the UK's energy economy. The group visited the Aberdeen City Council, meeting with City Council members, which gave an overview of the city's energy efficiency policies as an industrial and energy-producing city. A meeting with the public private partnership, Aberdeen Renewable Energy Group, discussed the role of renewables in the energy efficiency discussion and the explored potential conflicts regarding collaboration with the fossil fuel economy in Aberdeen. A presentation at the social enterprise SCARF ("Save cash and reduce fuel") informed the participants about how the group promotes Energy Efficiency measures to a broader public in Aberdeen and the surrounding area. A visit with FES Renewables (a private company that gives guidance to users regarding the use of solar, wind turbines and biomass) completed the program.

ELEEP provides expert-reviewed policy recommendation to policy decision-makers in the EU and the US based on the experiences they made during the UK study tour. All the recommendations are discussed and reviewed at the ELEEP Assembly 2014 in Brussels to specify the results and advices to different stakeholders engaged in energy and environment policy or business.

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Highlights of the Policy Recommendations

Recommendation I expresses the need to invest in existing industrial regions, ports, and other zones of economic activity. ELEEP sees the Non-Profit Aberdeen Renewable Energy Group (AREG) as a leading organization to create a jobs and growth plan that positively transform these resources into new economic zones. Aberdeen was the former gas and oil capital of Europe and has a group of almost 170 companies dedicated to use the infrastructure and experience currently dedicated to extracting North Sea oil and gas in the new energy application. As a result, Scotland boasts 11,000 jobs in renewable energy. Long-term, AREG plans to help Aberdeen companies become the lead in global technology development training, and processes related to renewable energy in Europe. With a European grant of 40 million Euros AREG plans to set up an offshore wind training center and to enhance member services for an international clientele.

Recommendation II contains the analysis of existing behavioural consumer barriers of an energy efficiency uptake. ELEEP sees especially short-term preferences, status quo biases, lack of information, low level of trust and high aversions to risk as some of these barriers. Therefore ELEEP recommends overcoming short-term preferences, upfront costs of energy efficiency may be distributed over time, as Green Deal initiatives endeavor.

Recommendation III focuses on knowledge gaps and awareness factors proving to be a persistent and prominent barrier to energy efficiency investments. Following the Green Deal Rule of “insulate, understand, replace” is a good way to discover hidden costs and ensure that upgrades are a net benefit to the consumer.

Recommendation IV is an outcome of this study tour that highlights the fact that policy and regulatory decisions that are made today should avoid decisions that limit other options in the future of a sustainable pathway. ELEEP illustrates different pathways of policy-making with a comparison of the environmental policy in the US and the UK.

Recommendation V demonstrates the UK New Green Deal actions to lower interest rates for borrowing on efficiency implementation loans, facilitate an expedited application process for these, and reduce upfront costs by allowing ownership and investment alternatives.

In Recommendation VI sheds light on the difficulties of direct policy diffusion. UK New Green Deal instruments cannot be implemented by the US through simple adoption. ELEEP gives the example of private or privatized energy efficiency home improvements loans in the US and UK which are based on different ways of coordination processes.

Recommendation VII includes that energy efficiency initiatives in some countries must now shift from utilities/businesses to buildings and homeowners because of their significant portion of energy consumption for heating and transportation. ELEEP sees the biggest potential at the homeowner and building-owner level.

Recommendation VIII suggests non-financial government awards/prizes for energy efficiency for businesses as an effective means of driving change, including hotels, supermarkets, and other consumer-facing operations.

Recommendation IX contains the need for a change of the legal system for retrofitting and implementation for energy efficiency measures in order to incentivize the owner. ELEEP sees a solution in the change of rental laws and new ownership models.

In Recommendation X, ELEEP sees a big opportunity for effective implementation through a collaborative partnership with industry and civil society. Through these collaborations, civil society is more empowered and responsible for rolling out policy implementation.

Recommendation I: Invest in existing industrial regions, ports, and other zones of economic activity for maximized energy efficiency improvements and sustainable economic growth.

Example of Aberdeen and the AREG, http://www.aberdeenrenewables.com/

- Former city with 20% of workers in oil and gas industry (since 2005 decline of North Sea oil and gas reserves)
- Non-Profit Organization
- Provides all services of an trade association and works with the supply chain to position Scottish renewable energy companies to win business
- Workshops, engagements, case studies, expertise, member directory, news alert, information dissemination, business support and executing projects

Recommendation II: Empower the consumer to make the decision to invest in energy efficiency by implementing behavioural insights in policy and programme design.

Justification: Consumer implementation is a sine qua non for energy efficiency uptake. However, many behavioural barriers exist. These include short-term preferences, status quo bias, lack of information, low levels of trust and high aversions to risk. Policies and programmes should seek to overcome these barriers by including behavioural insights. For example, to overcome short-term preferences, the upfront costs of energy efficiency may be distributed over time, as Green Deal initiatives endeavour. Factors related to trust and risk aversion may be addressed through insurance policies that guarantee energy efficiency performance, or through quality assurance measures. Where ESCO models such as those prevalent in the US do not exist, other governance mechanisms may be adopted to re-distribute risk away from the consumer to facilitate demand-driven uptake of energy efficiency.

Recommendation III: When implementing energy efficiency policies, take lessons and learn from effective salient approaches at different levels of governance (local, regional, national) to address knowledge gaps and awareness factors proving to be a persistent and prominent barrier to energy efficiency investments

Justification: Some Organizations following the Green Deal Rule: "insulate, understand, replace" discovering hidden costs and ensure that upgrades are a net benefit to the consumer. Other organizations: Carbon-trust with the 'Life Blood Campaign' (vivid blood flows spilling over appliances and across rooms to visualise wasted energy) provides a salient visual of energy efficiency. Via community frameworks, Model home program for visitors to witness efficiency upgrades first-hand and meet homeowners, TV show "the real energy efficiency evangelists" and builds on positive attributes of trust that local intervention can generate.

Recommendation IV: Policy and regulatory decisions made today depend, in part, on decisions of the past, and they create path-dependency for decisions of the future. Avoid, where possible, decisions that limit options and lock-in questionable or unsustainable pathways.

Justification: A historical comparison of the environmental policy making in the US and UK offer some insight into the path-dependency of differing political climates and civic involvement. This backward-looking example can be extended to decisions that are being made today in terms of energy efficiency (or climate change in general).

	US	**UK**
1970	Strong environmental movements, Nixon & Ford signed many bills. (National Environmental Policy Act, the Clean Air Act Amendments, the Marine Mammal Protection Act, the Endangered Species Act)	Starting with pollution act first but ended up by oil shock
1980	Reagan reduces regulatory burdens on the industry, slowing down of movement activities	Thatcher put Climate Change Policy on the Agenda
1990	Still environmental concerns but Congress became more and more polarized and bills couldn't pass it.	Growing policy interest on the state level
Today	**L**ack of international and federal policy making addressing Climate Change	Kyoto Protocol, EU policy making, UK Climate Change Act 2008, UK Carbon Plan 2010, UK Green Deal 2010

Recommendation V: To address barriers to uptake of energy efficiency measures (i.e. the UK's Green

New Deal) implement three significant changes – 1. lower interest rates for borrowing on efficiency implementation loans; 2. facilitate an expedited application process for these; and 3. reduce upfront costs by allowing ownership and investment alternatives.

Justification: The UK Government has spent around £13 million since 2010 on energy efficiency (EE) campaigns. One such campaign is the UK's Green Deal Programme, which started in autumn 2012. The Green Deal allows customers to repay EE investments through their energy bills through 'fixed-term credit arrangements'. A feature of the program is that customers can pass the obligation of credit repayments to future building occupiers. Once EE measures are implemented, consumers pay similar or lower total electricity rates because of reduced electricity use, by paying for a reduced use of KWh, plus a credit repayment installment. If, for example, a consumer, paid £50/month before the Green Deal, then the resulting costs to the user should not exceed this monthly amount. In addition, the length of the repayment is set so as not to exceed the expected lifetime of the EE measures.

The Green Deal is said to have raised awareness. However, there appear to be limitations on the ability of the program to attract customers. The Green Deal seems to have been far out of reach for consumers as follows: (i) The cost of finance under the Green Deal is meant to be lower than many retail finance offers, yet a rate of 7% still seems high. If instead, the credit were to be rolled up with mortgage payments and with interest rates comparable to mortgages (~5%), the Green Deal would be more attractive; (ii) The upfront costs (£80-175) can become a barrier for customers who earn low incomes, are underemployed, have large monthly expenses, or who do not see a benefit in an initial investment (including of time) to go through the process of the Green Deal if their electricity bills will end up costing the same during the first few years; and (iii) There are a suite of bureaucratic complications that have also deterred applications and which can be smoothed, by, for example, making application forms more easily available.

Recommendation VI: Policies and policy frameworks cannot be transferred one-to-one to other countries with different legal systems. Policy makers and analysts should focus on policy diffusion and learning and facilitate a scale-up of efforts. Having a legally-binding framework may be a good option, and would allow for local adaptations.

Justification: The UK's Green Deal, for example, is designed for the specific conditions of the UK. While the US and other countries can learn from the UK's experience, it is not possible to simply adopt the Green Deal in the US or elsewhere. The real work of policy diffusion comes not by understanding how a policy works, but rather how to translate the successful elements of a policy or policies into a different political situation.

Private or privatized energy efficiency home improvements loans are a case in point. When comparing the US situation with the UK, the Green New Deal is an example of this challenge. In the UK, coordination is required between government, installers, assessors and companies while in the US coordination would be limited to the banks for financing and contactors for the installation. While the loan in the UK is included in the energy bill and is transferred with the sale of the house, in the US the

loan would stand-alone so that, like mortgages and other home improvement loans, the loan is paid off as part of the settlement on the resale of the home.

An overarching framework with standardized objectives and tools may provide a good option to work collaboratively towards common goals.

Recommendation VII: In countries that have already taken initial measures for energy efficiency (i.e. the UK), initiatives must now shift from utilities / businesses to buildings and homeowners.

Justification: With over half of electricity usage and a significant portion of energy for heating and transportation being used by city-dwellers, energy efficiency's biggest potential is at the homeowner and building-owner level. The City of London offers interesting perspectives, opportunities, and challenges for this. While the city is unique in its size and home ownership (lots of rentals), it does have a unified strategy of retrofitting older buildings and a clear vision of producing 25% of energy locally. District heating systems can be powered by biomass or geothermal, improving heating efficiency and potentially reducing greenhouse gas emissions; combined heat-and-power plants are especially relevant in this context, and can provide constant supplies of electricity to augment electricity production from variable sources like wind and solar. Social housing emerges as an area where energy efficiency retrofits can succeed, since this area represents one-third of London's housing stock. Through planned renewal of the housing stock, 100 million pounds a year can be invested over 10 years, reducing electricity and heating demand, while reducing costs for vulnerable populations.

Recommendation VIII: Non-financial government awards/prizes for energy efficiency for businesses can also be an effective means of driving change. Hotels, supermarkets, and other consumer-facing operations may have an added incentive for adopting energy efficient methods and investing in more energy efficient equipment.

Justification:

Innovation for energy efficiency can be promoted in the form of prizes, contests, and other non-financial mechanisms. These go hand in hand with any policies that are implemented at a national or regional level.

Recommendation IX: In the UK, solutions for rental buildings and social housing are crucial. The legal system for retrofitting and implementation for energy efficiency measures have to be changed in order to incentivize the owners. UK policy: From 2018 you will not be able to rent a building that is F or G rated. (20 % of the commercial and domestic buildings)

Justification:

In many European countries there is no solution yet for rental and social buildings. The home owners sometimes even are penalized for investing in renewables or efficiency measures since the investments cannot be transferred to the beneficiaries. Change in rental laws and new ownership models have to be set in place.

Recommendation X: Governments can implement and monitor policies more effectively when they have highly collaborative partnerships with industry and civil society. Similarly, through these collaborations, civil society is more empowered and responsible for rolling out policy implementation.

Justification: The UK government has highly collaborative relations with a number of organizations that represent different areas of civil society (e.g. the UK Green Building Council or Carbon Trust). This allows and enables more progressive and ambitious messages regarding policy implementation and its benefits. Furthermore, policies are more pragmatic when they have direct input from those who have to implement them on the ground (i.e. builders, businesses, etc.).