



REVIEW OF THE BALANCE OF COMPETENCES ENERGY POLICY

Response by the Institute for European Environment Policy

1 INTRODUCTION

The Institute for European Environmental Policy (IEEP) is an independent research organisation concerned with policies affecting the environment in Europe and beyond. Our aim is to disseminate knowledge about Europe and the environment in a broad sense and to analyse and present policy options. We undertake research and consultancy on the development, implementation and evaluation of environmental and environment-related policies in Europe. We work closely with the full range of policy actors from international agencies and the EU institutions to national government departments, NGOs and academics.

We are a charity with offices in London and Brussels and a network of partners in other European countries. The London office of IEEP was founded in 1980, the Brussels office in 2001. A presence was established in Finland in 2008.

2 SOURCES OF EVIDENCE

The evidence underpinning the response that we are making to the consultation is drawn from several sources. These include:

- More than 30 years of experience of EU policy, primarily in environmental and related policy domains, by staff, associates and trustees, stretching back to the 1970s. EU energy policy has become increasingly important within this spectrum, not least because of the linkages to climate objectives. Our activities have included both academic and applied research work, sustained interaction with the European institutions, national officials engaged in EU matters and other stakeholders from civil society, business, science, research and elsewhere, the organisation of conferences and events, evidence to the European Parliament, parliamentary committees in the UK, etc.

- A number of research and consultancy projects, reports covering both specific issues and the broader generality of EU energy policy. These include: on *energy efficiency*, IEEP's recent assessment of costs and benefits of energy savings¹; on *bioenergy*, IEEP has published widely on the sustainability of different forms of bioenergy and biofuels², on necessary policy reform³ as well as on the potential for an advanced biofuels industry in the UK and Europe⁴; on wider *energy (and climate) policy*, IEEP has undertaken comparative studies on energy and carbon taxes in the context of environmental tax reform⁵ and phasing out environmentally harmful subsidies⁶. Experience also has been gained in undertaking work relating to EU legislation commissioned by different DGs within the European Commission, including drafting impact assessments, reviewing implementation of extant legislation, examining issues where EU intervention might have a role, etc.
- Representation on formal groups and committees. At present we are represented in two so-called "high level groups" established by the European Commission, one concerned with the future of policy related to the car industry in Europe, the other with key enabling technologies.

ISSUES OF COMPETENCE AND NATIONAL INTEREST

Before providing answers to the detailed questions in the Energy Review, we would like to clarify two overarching issues that we deem important for the overall Balance of Competences review process:

1. There is a need to ***distinguish between three different questions*** while performing the review: One relates to establishing the right level at which competences should be established in principle (ie European, national, or global). A second concerns the relevant EU and Member States structures and institutions and their capacity to exercise competence in an appropriate way. The third is a different question about whether good

¹ Sauter, R., Volkery, A. (2013) Review of costs and benefits of energy savings, A report by the Institute for European Environmental Policy (IEEP) for the Coalition of Energy Savings. Task 1 Report. Brussels. 2013

² Bowyer, C, Baldock, D, Kretschmer, B and Poláková, J (2012) *The GHG emissions intensity of bioenergy: Does bioenergy have a role to play in reducing Europe's GHG emissions?* IEEP: London.

Díaz-Chavez, R, Kunen, E, Walden, D, Fingerman, K, Arya, L, Kretschmer, B, Poláková, J, Farmer, A, Bowyer, C, Menadue, H, Alberici, S and Toop, G (2013). Mandatory requirements in relation to air, soil, or water protection: analysis of need and feasibility. Report by Winrock, IEEP and Ecofys for the European Commission (DG ENER) under the contract ENER/C1/2010-431.

³ See for example recent policy briefs related to the ILUC file: <http://www.ieep.eu/minisites/pursuing-change-in-biofuels-policy-developing-alternatives/briefings/iluc/>

⁴ Kretschmer, B, Allen, B, Kieve, D and Smith, C (2013) *Shifting away from conventional biofuels: Sustainable alternatives for the use of biomass in the UK transport sector*. An IEEP discussion paper produced for ActionAid. IEEP: London.

⁵ Withana, S., ten Brink, P., Kretschmer, B., Mazza, L., Hjerp, P., Sauter, R., (2013) Evaluation of environmental tax reforms: International experiences, A report by the Institute for European Environmental Policy (IEEP) for the State Secretariat for Economic Affairs (SECO) and the Federal Finance Administration (FFA) of Switzerland. Final Report.

⁶ Withana, S., ten Brink, P., Franckx, L., Hirschnitz-Garbers, M., Mayeres, I., Oosterhuis, F., and Porsch, L. (2012). *Study supporting the phasing out of environmentally harmful subsidies*. A report by the Institute for European Environmental Policy (IEEP), Institute for Environmental Studies - Vrije Universiteit (IVM), Ecologic Institute and Vision on Technology (VITO) for the European Commission – DG Environment. Final Report. Brussels. 2012

policy decisions have been taken in the past by actors at those levels. This helps to clarify the point that bad decision-making in the past, as has arguably been observed at the EU level as well as nationally and regionally, does not necessarily imply that responsibility is allocated at the wrong level, and vice versa.

2. The second point of clarification relates to ***defining the UK's interest***, a phrase that is repeatedly used in the consultation documents. Given the UK is a part of the EU, it is clear that good outcomes for the EU are also good outcomes for the UK. In other words, entirely separating UK and EU interests is not helpful. Because of external effects, both environmental and energy policies are cases in point. There are situations in which, although some competences would be better off at the Member State level for some countries from a purely nation-state perspective, actually moving the competence to the Member State level would not, overall, be advantageous for the environment and the wider public interest, neither in particular countries nor in the EU as a whole. This is because moving competences might well lead to a situation where more Member States would perform worse rather than better compared to a situation where environmental legislation is in the hands of the EU.

In considering the national interest in the context of potentially different relationships between the UK and the EU it is perhaps most relevant to weigh up the advantages of pooling aspects of sovereignty in a policy domain, such as energy, with the compromises this usually entails, with the alternative, pursuing greater national autonomy outside the EU. The latter path has many implications, including a continued need to negotiate fresh relationships with the EU and a number of its policies given its role as a powerful neighbour. This is a different judgement to make than assessing whether a particular set of EU policies is better or worse than those which the EU might make at any given moment. It is this last question which often receives the greatest attention but it should not be confused with the more fundamental issues of competence which the review appears intended to address.

3 QUESTIONS

To what extent does EU action in the energy field benefit and / or disadvantage the UK / your sector/stakeholders? Is there a sector where this is most marked?

The question of national benefits is not straightforward, as remarked above. Some of the principal benefits inside and beyond our particular sphere of interest can be summarised as:

Benefits

- UK energy security has benefitted from important European infrastructure projects, such as the gas and electricity interconnectors between the UK and continental Europe. Recent funding streams, ie the Connecting Europe Facility, continue to make available EU funding for infrastructure development in the UK. A more developed and inter-connected energy infrastructure has long term benefits for the UK and other Member States, potentially more so with a higher level of renewables in the supply mix.
- Binding EU targets for renewable energy sources have stimulated very significant new investment and jobs in the UK renewables sector and a far greater growth in renewables than otherwise would have occurred. The UK has gained technology leadership, notably

in the area of offshore wind, and having renewable energy targets in place throughout the EU opens up significant investment opportunities for UK industries.

- EU level action to support research, development and demonstration further contributes to the development of low carbon technologies in the UK and helps the UK to develop new industries, for example through successful UK applications for funding in the area of ocean energy under the NER300 funding stream.
- EU policies on energy efficiency supported and helped to motivate the UK in making progress in this area, contributing to lower energy consumption, hence lower greenhouse gas emissions and improved energy security. They also helped to attract attention in emerging markets in Asia to energy efficiency product standards, which in principle opens up new markets for UK and European producers.
- The UK has been able to influence EU energy market liberalisation in the spirit of its own model. Whatever the consequences in economic, energy supply and environmental terms it has attracted significant foreign investment to the UK.

Challenges

- As a frontrunner in some areas, there is a need to align UK domestic policies to EU legislation where this gets adopted. However, at the same time, this might entail, as has happened in the past, that existing UK practices are promoted EU wide, resulting in 'first mover' advantages.
- Due to slower liberalisation efforts in most other Member States, UK energy companies have as of yet not benefitted to the full extent from investment opportunities abroad. This is outside of our sphere of expertise but arguably it reinforces the need for the UK to play a strong role in EU debates and push for the completion of the internal market.

What have been the benefits or disadvantages for the UK / your sector of the development of the internal energy market? Is further or deeper integration of EU energy markets desirable?

It is broadly accepted that the EU internal energy market has to a large extent been modelled on the basis of the UK approach to energy market liberalisation. The UK was able to use the EU as vehicle to spread its regulatory approach across Europe which underlines the UK's strong influence in shaping EU (energy) policy. The UK as first mover was in an advantageous position and attracted considerable foreign investment. Other key benefits of the development of a more integrated internal energy market include downward pressure on energy prices as a result of stronger competition. A recent study for the European Commission⁷ estimated that further gas market integration could result in benefits of up to €30 billion per year and that further integration of the electricity market could generate annual benefits of up to €16 billion by 2015 and as much as €40 billion by 2030 in the EU. For 2012 alone the benefits were estimated at up to €27 billion due to gas market

⁷ Booz & Company, Newberry, D., Strbac, G., Pudjianto, D., Noel, P, LeighFisher (2013) Benefits of an Integrated European Energy Market. Final report prepared for Directorate-General Energy, European Commission.

integration. Besides these economic gains the UK has benefitted from increased energy security as a result of physical market integration (see below).

However, the UK's first mover role may have been disadvantageous in that the country's fully liberalised market has exposed UK energy companies to competitors in other Member States that were benefitting from protected markets and could use their power to enter the UK market. While the market entry of utilities from continental Europe may have increased competition in the UK to the benefit of final consumers, UK energy companies did not benefit from similar expansion strategies in other European markets. From an economic perspective this has underlined the rationale for a more proactive approach at EU level to advance energy market integration to the benefit of both energy suppliers and consumers. Greater integration will however require further clarification on the ultimate objectives of market integration. For example, a conflict between UK policy choices and EU level intervention may arise due to different priorities on the key policy objectives. While the UK has more recently pushed for an energy policy dominated by the objective to reduce greenhouse gas emissions, other Member States put more emphasis on energy security which may result in different market frameworks and public interventions.

To what extent do you think the UK has benefited or been disadvantaged by EU measures to increase security of supply and facilitate infrastructure development?

The UK is among the EU Member States with the highest share of natural gas (over one third) in gross inland energy consumption. It has been a net importer of gas since 2004 with net imports of gas accounting for 47 per cent of supply in 2012.⁸ While pipeline imports from Norway are the most important source for gas imports, interconnectors with the Netherlands, operating since December 2006, and with Belgium are important components of the UK's gas supply infrastructure. The UK was also a net importer of electricity. Although imports have a low share of below 5 per cent in total electricity supply, virtually all imports came from continental Europe via the interconnectors with France and the Netherlands.⁹ Being embedded in the European gas and electricity networks with interconnections to continental Europe has therefore contributed to security of energy supply in the UK, which is clearly in the interest of UK business and consumers.

Infrastructure projects such as the interconnectors between the UK and the European mainland have been substantially supported by EU level measures either by action plans to remove bottlenecks in the European energy markets or by providing important EU co-funding.¹⁰ Future funding for improving UK energy infrastructure and hence its energy security will be available under the Connecting Europe Facility. The first list of priority energy projects published by the Commission under the Connecting Europe Facility includes several UK priority energy projects relating to the priority corridor 'Electricity Northern Seas

⁸ DECC (2013) Digest of UK energy statistics (DUKES), Natural gas, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65800/DUKES_2013_Chapter_4.pdf

⁹ DECC (2013) Digest of UK energy statistics (DUKES), Electricity, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65800/DUKES_2013_Chapter_4.pdf

¹⁰ For an overview of projects financed through the Trans-European Energy Networks (TEN-E) programme in 1995-2012 see http://ec.europa.eu/energy/infrastructure/ten_e/doc/2013_ten_e_financed_projects_1995_2012.pdf

Offshore Grid (NSOG)' but also 'Electricity WEST', 'Gas WEST' and 'Smart Grids'.¹¹ The selected projects will benefit from a number of advantages including accelerated planning and permit granting procedures (binding three-and-a-half-years' time limit) and the possibility of receiving financial support under the Connecting Europe Facility. The total budget available to trans-European energy infrastructure projects for the period 2014-20 under the Connecting Europe Facility is €5.85 billion. The pipeline of projects of relevance to the UK shows the important role that EU measures and support continue to play for the development of energy infrastructure in the UK. In addition to the improved infrastructure, EU Member States' energy security is strongly reinforced by coordinated action at European level in times of crisis, benefitting consumers and businesses in all Member States including the UK.

What effect have EU measures had on the development and exploitation of the UK's indigenous energy sources? Are further measures needed in regard to exploitation of unconventional sources, for example shale gas?

We have been involved in reviews of current EU legislation relating to the exploitation of shale gas, yet to be finalised. There are a number of environmental safeguards in place already but the overall coverage of these measures and their coherence as a group could be improved and we consider that a new, more comprehensive, measure would be valuable.

How have measures and policies at an EU level helped or hindered the development and deployment of sustainability measures - energy efficiency, renewable and low carbon energy? What have been the impacts of these measures on other forms of energy generation and the internal market? Should the EU be doing more or less?

In 2009, the EU adopted an ambitious energy-climate legislative package that made a real change to investments on the ground. The Renewable Energy Directive's (RED)¹² binding target to achieve a 20% share of energy from renewable sources out of total final energy consumption by 2020 implied a step change compared to the previous framework of indicative targets only in the heat and electricity sectors¹³. Nonetheless, the extent of Member States' initial level of installed capacity as well as economic and resource potentials were taken into account in formulating differentiated national targets, 15% in the case of the UK. Tracking of Member State progress in the field of renewable energy by the Commission shows that the indicative targets for 2010 in the electricity and transport sectors were missed by a majority of Member States¹⁴. Earlier Commission analysis¹⁵ concluded that the rate of growth in renewables investment had increased with the

¹¹ European Commission (2013): Full list of projects of common interest by country, http://ec.europa.eu/energy/infrastructure/pci/doc/2013_pci_projects_country.pdf

¹² Directive 2009/28/EC of 23 April 2009 on the promotion of the use of energy from renewable sources

¹³ Directive 2001/77/EC of 27 September 2001 on the promotion of electricity produced from renewable energy sources; and Directive 2003/30/EC of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels.

¹⁴ For electricity, 15 Member States failed to reach their 2010 target and for transport, 22 Member States failed to reach the 5.75% target by 2010, as analysed in the European Commission's 2013 renewable energy progress report, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2013:0175:FIN:EN:PDF>.

¹⁵ Commission's 2011 renewable energy progress report, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0031:FIN:EN:PDF>

adoption of the RED and its binding targets and was anticipated to remain high up to 2020, as projected by Member States in their National Renewable Energy Action Plans (NREAPs).

As reported by DECC, between January 2010 and September 2013 private sector investment in renewable electricity generation worth £31 billion was announced with the potential to support over 35,000 jobs¹⁶. However, the 2013 progress report projects a gloomier outlook for investment in the renewables sector for the years to come up to 2020 as the impacts of the economic and financial crisis trickle through to this sector. While these effects make it more challenging to meet the renewable energy target, they must not distract from **significant growth in renewables deployment. The presence of EU-level binding targets has certainly facilitated development of renewable energy sources within the UK.** As noted earlier, policy support for renewables facilitated a scaling up of offshore wind in the UK and UK leadership in an industrial sector with significant growth potential that is envied in other Member States, such as Germany where barriers remain to be overcome to reach ambitious objectives in the deployment of offshore wind. Besides the strong stimulus for renewables deployment, EU level action to support research, development and demonstration has helped the UK to develop new innovative industries. For instance, under the NER300 funding programme¹⁷ the UK was awarded nearly €40 million to develop two innovative ocean energy projects.

At the same time, more remains to be done. The rapid scale-up in bioenergy use precipitated by the RED has introduced serious questions of sustainability. These include major concerns about the lifecycle impacts of growing bioenergy consumption on climate mitigation efforts over the period to 2050. There are several reasons for these concerns, one of which is the very limited regulatory requirement to take account of indirect land use change (ILUC) factors in assessing the performance of biofuels under present EU legislation, despite its importance in the calculation of real impacts on the climate. In this area a robust EU policy framework is yet to be put in place.

While sustainability criteria for biofuels and bioliquids are included in the RED, they remain incomplete, with indirect land use change emissions not accounted for, definitions (highly biodiverse grasslands) outstanding and certain sustainability issues not addressed (eg soil and water impacts as well as social impacts). Efforts to modify the requirements have not borne fruit and it is unclear whether the EU institutions can reach agreement on a modified version of the recent Commission proposal without seriously weakening the sustainability safeguards it proposes, which themselves are less than those IEEP considers to be necessary. Equally pressing is the situation related to use of solid and gaseous biomass (mainly for heat and electricity generation) where no harmonised EU criteria have been proposed up to date. This puts into question the low-carbon and sustainable nature of using these sources. It might also introduce new obstacles to the internal market if (and once) individual Member States were to adopt national measures in this area.

¹⁶ DECC (2013) UK Renewable Energy Roadmap Update 2013, [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255182/UK Renewable Energy Roadmap - 5 November - FINAL DOCUMENT FOR PUBLICATION_.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/255182/UK_Renewable_Energy_Roadmap_-_5_November_-_FINAL_DOCUMENT_FOR_PUBLICATION_.pdf)

¹⁷ A large EU funding programme to support the deployment of CCS and innovative renewable energy technologies, whose funds are derived from the sale of 300 million emission allowances from the new entrants' reserve (NER) set up for the third phase of the EU emissions trading system (EU ETS), <http://ec.europa.eu/clima/policies/lowcarbon/ner300/>.

UK energy efficiency policies have been strongly guided by EU legislation such as the Energy Performance of Buildings Directive (EPBD)¹⁸, the Framework Directive for Setting Ecodesign Requirements for Energy related Products¹⁹ and the more recent Energy Efficiency Directive²⁰. **These measures encouraged the UK to make progress in energy efficiency contributing to lower energy consumption, hence lower greenhouse gas emissions and improved energy security.** Lower energy consumption means lower energy bills and net savings for citizens and industry and hence ultimately contributing to jobs and growth, as a recent review by IEEP on costs and benefits of energy savings showed²¹. EU legislation has provided additional impetus to energy efficiency policies in EU Member States including within the UK. For example, it has required the development of energy efficiency action plans and set targets at the EU level while giving Member States a choice as to how these targets are implemented at national level. The UK not only benefits in terms of lower energy consumption and lower emissions but also in terms of indirect benefits such as lower energy demand in Europe that reduces pressure on energy prices and increases energy security. The ecodesign requirements for energy related products provide for common standards in the internal market and stimulate innovative products consuming less energy with better market opportunities. Not only do these common standards help UK products in the internal market, but they also attract attention in non-EU markets such as Asia²² and hence open up new opportunities for UK products in emerging markets. This is only possible because of the EU internal market is the biggest common market in the world.

The UK has undoubtedly been successful in shaping EU legislative outputs in the field of energy efficiency on some occasions. For instance the Energy Company Obligation scheme was a policy design that was picked up in the recent Energy Efficiency Directive to encourage other Member States to put similar schemes in place.

To ensure the continued deployment of sustainability measures, a clear EU signal for the post-2020 period is now needed, since this has become key to Europe's energy future and fulfilment of its climate objectives. Commission proposals are expected for the end of January 2014. Some Member States, including the UK, are pushing for a **GHG target only, which IEEP believes is not sufficient.** The European Parliament and a number of Member States are also signalling support for a triple target. Separate targets are a necessary condition to attract sufficient investment in both the renewables and energy efficiency sectors (as has been demonstrated by the move from indicative to binding targets under the RED) and to exploit the cost-effective potential in the period to 2030. Also from a technology and innovation policy viewpoint, a technology neutral approach under a GHG target alone would not be sufficient as the 'cheapest' technology under current market conditions would in many cases not be renewable energy and/or energy efficiency technologies. **This would delay development of low carbon technologies EU wide, and hence also reduce the UK's potential for pursuing investment opportunities abroad, for example in the field of offshore wind.** In addition to cost issues, many other barriers persist

¹⁸ Directive 2002/91/EC

¹⁹ Directive 2009/125/EU

²⁰ Directive 2012/27/EU repealing the Directive on Energy End-Use Efficiency and Energy Services Directive 2006/32/EC

²¹ Sauter, R., Volkery, A. (2013), as cited above

²² See for example the establishment of the EU-ASEAN Energy Efficiency Standards Harmonization Initiative, <http://www.switch-asia.eu/switch-asia-projects/project-impact/projects-on-designing-for-sustainability/energy-efficient-air-conditioners-in-asean.html>

that require RES and EE targets, one important (and investment-intensive) one being grid development. **A triple-target framework for 2030 is therefore needed to avoid continued technological lock-ins and to take the necessary steps now to make our energy system fit for a low-carbon future.**

What implications will future challenges in the energy field have for the UK and EU, for example the effects of increasing global demand for energy, potentially rising global market prices and the transition to a low carbon economy to meet climate change objectives?

Both increasing global demand and subsequent rising energy prices will make low carbon and energy efficient technologies even more profitable options and constitute an important growth market in future. In order for the EU and the UK to be prepared to fully exploit these market opportunities and to avoid economic downturns associated with rising energy prices, measures need to be taken now to avoid technological lock-in of carbon and energy intensive solutions that would expose our economies to the risks of future high and volatile energy prices. These measures should include continued, but tailored, support for renewables and other low-carbon technologies, taking into account their deployment status and maturity, in order to move along the learning curve and continuously bring down their technology and policy costs. A triple-target framework for 2030 with ambitious GHG reduction, energy efficiency and renewable energy targets is necessary for this reason. EU level binding targets leaving Member States sufficient room for setting priorities in line with national preferences can provide for the necessary market scale. Such a target framework needs to be complemented by continued efforts, coordinated at EU level, to ensure that the upgrading of the UK and European energy grid infrastructure is in line with the requirements of a low carbon energy future, including further improvements in the interconnection between the UK and continental Europe.

EU energy policy can provide an important stimulus in those areas. Efforts to complete the internal market, foster energy efficiency and renewable energy technologies and stimulate investment in European grid infrastructure will make the EU's and hence also the UK's energy system fit for the future challenges ahead. At the same time, the EU benefits from being the largest common market in the world, which gives it negotiating power on world energy markets that is valuable given its high energy dependency. Also, the EU market can set precedents in areas such as energy efficient product design or renewable support schemes that spill over to other regional markets, hence contributing to decarbonisation elsewhere while at the same time creating investment opportunities for European firms abroad.

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