



## EU Energy and Environment Sub-Committee EU Energy Governance Written and Oral Evidence

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## **Dr Anatole Boute—Written Evidence**

In the European Union, most existing support schemes (including in the United Kingdom) aim to stimulate the production of electricity from renewable energy sources (expressed in megawatt hours or MWh) rather than the installed capacity of renewable energy installations (expressed in megawatt or MW). Existing schemes influence the price at which the electricity produced from renewable energy is sold (e.g. feed-in tariffs) or the volume of “green” electricity purchased on the market (e.g. green certificates or portfolio obligations). Both price and volume-based schemes integrate support for renewable energy in the electricity commodity market, i.e. the “energy” market.

In contrast to output-based support schemes, capacity remuneration mechanisms generally aim to ensure the reliable and secure functioning of the electricity system by remunerating the availability of power plants – in particular peak production capacity – to produce electricity. Capacity markets are a reaction to concerns that, in a liberalized environment, “energy-only” markets might not succeed in attracting sufficient and adequate investments to ensure reliable and secure electricity supply. Variable types of renewable energy installations are characterized with a limited level of “firmness”. Because they depend on uncontrollable – yet increasingly predictable – external sources (e.g. wind patterns), the contribution of variable installations to system adequacy and reliable electricity supply is more challenging than for conventional thermal power plants.

In the EU and internationally, capacity markets are increasingly considered necessary to attract adequate investment in back-up generation capacity to compensate for the variable and less flexible production patterns of renewable energy installations. At the same time, the EU Commission aims to phase out the subsidies for renewable energy sources and integrate green energy into electricity markets. According to this policy, a functioning Emissions Trading Scheme – with sufficiently strong and predictable carbon prices – should provide the right signals to clean energy investors. However, the objective of integrating variable renewable energy sources into the electricity market and creating a level playing field for clean energy sources via carbon pricing, cannot be achieved if electricity investments are made based on capacity remuneration mechanisms that are not adapted to the basic characteristics of variable wind and solar PV. In the context of the debate on the creation of capacity mechanisms in the EU electricity markets, it is necessary to consider the integration of renewable energy sources in capacity markets.

A capacity-based approach to the support of renewable energy appears to fit particularly well with the specific financial characteristics of most types of renewable energy installations. Indeed, wind, solar, hydropower and geothermal energy installations are characterized with relatively high investment costs and low operating costs. Investors in renewable energy would therefore benefit from support mechanisms that guarantee the repayment of their investment in function of the installed capacity of their installations. Moreover, remunerating the installed capacity of wind energy installations would reduce price risks related to low wind periods. In addition, financing installed capacity and not electricity output could to some extent limit the impact that the large-scale deployment of renewable energy can have on market prices and the operation of the grid. Indeed, by decoupling the amount of support from the amount of electricity produced, the operators of renewable energy installations would have less incentive to deliver electricity to the grid in periods of low demand than under the current output-based schemes.

However, given their apparent incompatibility, the use of capacity mechanisms (i.e. reliability mechanisms) to promote renewable energy (i.e. variable and relatively inflexible sources) remains largely unexplored. Past experiences with capacity-based support mechanisms (e.g. in India) have led to reduced efficiency of the constructed turbines, with investors focusing on installed capacity (“steel-in-the-ground”) rather than energy production. This contradicted the fundamental objective of renewable energy policy which is to decarbonize electricity production and improve energy security by replacing fossil fuels with renewable energy sources. This experience resulted in the implicit consensus that support schemes based on the electricity output is the only way to promote renewable energy sources.

On the one hand, strict evaluation criteria of the availability of production installations to produce electricity are likely to constitute a barrier to the development of renewable energy under capacity markets. The remuneration of renewable energy installations under capacity markets could be outweighed by financial penalties due to the inability of these installations to meet the availability requirements for capacity supply.

On the other hand, strict availability requirements incentivize renewable energy investors to improve the production efficiency of their turbines and thus avoid the “steel in the ground” syndrome that affected previous capacity-based schemes. By remunerating the availability of renewable energy installations to produce electricity instead of the amount of electricity produced, capacity markets reduce the incentive to deliver electricity to the grid in periods of low demand. This could facilitate the management of variable flows on the network and could thus contribute to the integration of renewable energy sources in the electricity system.

Promoting wind and solar energy through capacity markets requires overcoming the hurdles that the current design of capacity markets represents for these installations. Assessing capacity supply on the basis of the maneuverability of power plants disadvantages variable renewable energy installations that are characterized with a more challenging dispatchability. Specific arrangements must be included in capacity markets in order to adapt existing availability requirements to the relatively inflexible production patterns of some renewable energy installations. At the same time, sufficient incentives must be maintained to stimulate the production efficiency of renewable energy installations and avoid remunerating investors just for putting “steel in the ground”.

The estimated availability of variable renewable energy installations could for instance be calculated on the basis of longer periods, e.g. year averages or four year periods. These year averages could be regularly updated to take account of actual performance. Alternatively, the availability of wind power could be calculated closer to actual supply, as forecast errors are reduced. In fine-tuning the capacity-based support scheme, the EU, national governments and electricity market authorities will have to assess whether renewable energy-specific rules on the availability for electricity production (e.g. year averages) are adequate to ensure the financial viability of renewable energy installations.

2 October 2015

## **Carbon Capture and Storage Association (CCSA)—Written Evidence**

### **Introduction**

The Carbon Capture and Storage Association (CCSA) is pleased to provide evidence to the House of Lords European Union Committee, Energy and Environment Sub-Committee in relation to EU energy governance. The design of a new governance system to support the delivery of the EU 2030 Framework for Climate and Energy Policies (the 2030 Framework) and the Energy Union presents an important opportunity to ensure that EU-level objectives are met in a manner that enables the UK to achieve its own energy and climate objectives, including the widespread deployment of up to 13GW of CCS by 2030<sup>1</sup>.

The CCSA brings together a wide range of specialist companies across the spectrum of CCS technology, as well as a variety of support services to the energy sector. The CCSA exists to represent the interests of its members in promoting the business of Carbon Capture and Storage (CCS) and to assist policy developments in the UK, EU and internationally towards a long-term regulatory framework for CCS as a means of abating carbon dioxide (CO<sub>2</sub>) emissions.

### **Case Study Two (national energy mix): Renewable energy targets**

*How could a governance mechanism assist the EU to deliver its stated policy, including not only the 27% renewables target but the overarching 40% emissions reduction target which relies in part on the renewables target?*

A new governance mechanism can help to increase the efficiency and effectiveness with which the EU delivers its stated energy and climate policy objectives. Under the existing 2020 framework Member States signed up to legally-binding targets for both renewables and energy efficiency and, whilst these targets have without question supported the deployment of these technologies and helped to reduce their costs, they have also focused Member State efforts on a particular subset of low carbon technologies arguably to the detriment of other technologies (such as CCS) that could lead to deep cuts in CO<sub>2</sub> emissions. This current course of action may not lead to the least cost solution in terms of CO<sub>2</sub> abatement. The IPCC Fifth Assessment Report, for example, demonstrates that without CCS the total cost of meeting climate objectives could increase by 138%.<sup>2</sup> In contrast, the same report finds that constraining the deployment of nuclear energy, for example, would only increase costs by 7%.

The CCSA has long-advocated for a level playing field for low carbon technologies, which drives investment into a range of technologies including renewables and CCS. In the UK, the Committee on Climate Change has found that there needs to be at least 4-7 GW of CCS deployment in the power sector by 2030 in order to realise cost reductions.<sup>3</sup> This will need

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<sup>1</sup> Electricity Market Reform Delivery Plan (DECC, 2013)

<sup>2</sup> Climate Change 2014: Mitigation of Climate Change, Summary for Policy Makers (IPCC, 2014)

<sup>3</sup> Potential CCS Cost Reduction Mechanisms (Pöyry & Element Energy for the Committee on Climate Change (2015))

to be further supplemented by additional CO<sub>2</sub> abatement from industrial CCS (e.g. CCS on steel, cement and chemicals productions) if the UK is to meet its Fourth Carbon Budget.<sup>4</sup>

Whilst the Impact Assessment published by the European Commission alongside its communication on the 2030 Framework suggested there will be very little CCS deployment across the EU by 2030 (between 0.23 and 0.77% of gross electricity generation, equivalent to up to 3.9 GW of installed capacity<sup>5</sup>), it is clear that, at a national level, CCS will be integral to meeting UK objectives around climate change, energy security and affordability of electricity.

The Energy Technologies Institute (ETI) has recently found that CCS could be worth more than £200 billion to the UK energy system and that, in the absence of CCS, the costs of decarbonisation could more than double by 2050.<sup>6</sup> A key challenge for the UK in this context is to ensure that the new EU energy governance system does not inadvertently provide a more supportive environment for any one low carbon technology over the other. It needs to enable the UK to deploy whichever technologies it deems to be most valuable to reducing UK emissions, including CCS.

In addition, the new governance mechanism also provides an opportunity to encourage other Member States to think beyond the decarbonisation of the power sector to 2030 and to consider longer-term and broader decarbonisation objectives. The UK has long been a leader in its approach to climate change and energy system decarbonisation, in part due to its whole systems analysis and legally-binding 2050 target established under the Climate Change Act 2008. It is through this deep energy systems analysis that the UK has identified the need for CCS at a national level (in both power and industrial sectors); analysis that is currently lacking in most Member States. The new governance mechanism should therefore require Member States to develop National Climate and Energy Plans not only in reference to 2030 but also incorporating a 2050 perspective into all applicable reference scenarios. This will increase the credibility of the Plans and encourage Member States to consider how they will decarbonise a broader range of sectors beyond electricity generation.

From a CCS perspective, incorporating a longer term perspective will be essential to realising the investments needed in projects before 2030. CCS projects typically require high capital investments and long project development times and, as illustrated in the ZEP report, Business models for commercial CO<sub>2</sub> transport and storage, the development of infrastructure, i.e. appraisal and characterisation of CO<sub>2</sub> storage sites and the development of pipeline infrastructure, can in some instances entail a project development period of up to ten years.<sup>7</sup> Given these long lead times it is essential that investments are being made sufficiently early in order to enable deployment of CO<sub>2</sub> capture projects at the necessary time and scale. In the UK it is estimated that approximately 700 MtCO<sub>2</sub> of bankable storage capacity will need to be available by the mid-2020s in order to achieve deployment of up to 10 GW of CCS in the power sector by 2030.<sup>8</sup>

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<sup>4</sup> Reducing emissions and preparing for climate change: 2015 Progress Report to Parliament (Committee on Climate Change, 2015)

<sup>5</sup> Impact Assessment accompanying the document: A policy framework for climate and energy in the period from 2020 up to 2030 (European Commission, 2015)

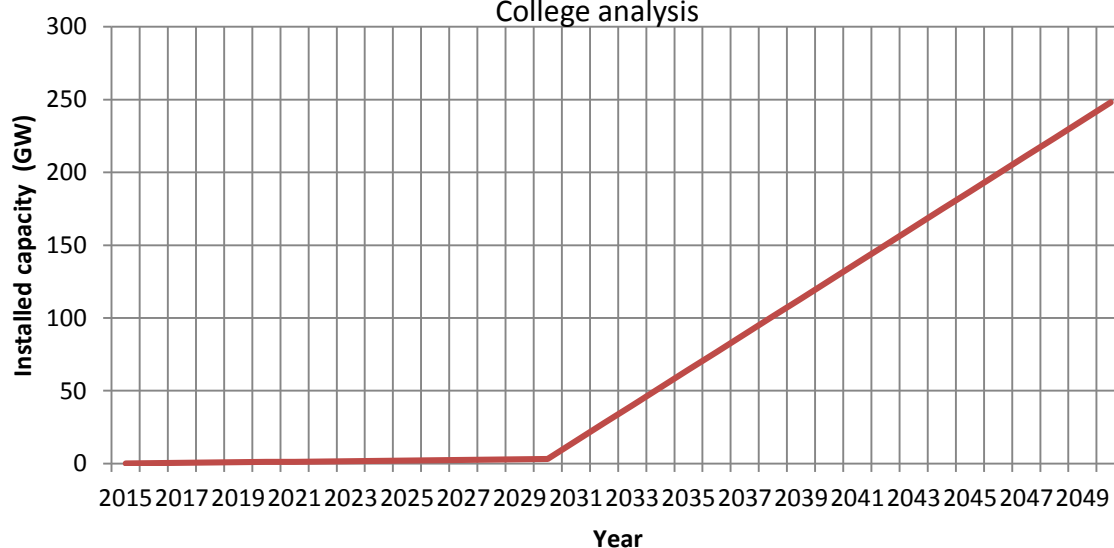
<sup>6</sup> Building the UK carbon capture storage sector by 2030 (Energy Technologies Institute, 2015)

<sup>7</sup> Business models for commercial CO<sub>2</sub> transport and storage: Delivering large-scale CCS in Europe by 2030 (Zero Emission Platform, 2014)

<sup>8</sup> Delivering CCS (CCSA, 2015)

At the EU level, it has been estimated by the London School of Economics and the Grantham Institute – based on analysis of the European Commission’s 2030 Framework Impact Assessment<sup>9</sup> - that the EU may need up to 248 GW of installed CCS capacity in the power sector by 2050.<sup>10</sup> Figure 1 (below) demonstrates that a deployment rate of more than 12GW installed capacity would be needed per annum between 2030 and 2050 in order to deliver this level of installed capacity.<sup>11</sup> In order to achieve this rate of deployment there would need to be substantial pre-investment in infrastructure development between now and 2030; a challenge that is made more difficult by the fact that some Member States insist that they do not need CCS in order to achieve their own goals for 2030, whether that is in terms of domestic objectives or contributions towards EU-level objectives.

**Figure 1.** Indicative deployment of CCS in the EU between 2015 and 2050. CCSA analysis based on European Commission Impact Assessment accompanying the EU 2030 Framework and LSE, Imperial College analysis



*How robust could a governance mechanism be without compromising Member State responsibility for their national energy mix?*

In order not to compromise responsibility for national energy mixes, the rigour of the governance mechanism needs to be focused only on the overarching policy objective; in this case, achieving the 40% emissions reduction target. In order to ensure that the system is robust and enforceable it may be necessary for an independent body to oversee the development and iteration of National Climate and Energy Plans and conduct in depth analysis as to the credibility, affordability and sustainability of the measures contained.

<sup>9</sup> Impact Assessment accompanying the document: A policy framework for climate and energy in the period from 2020 up to 2030 (European Commission, 2015)

<sup>10</sup> Bridging the gap: improving the economic and policy framework for carbon capture and storage in the European Union (London School of Economics and the Grantham Research Institute on Climate Change and the Environment, 2015)

<sup>11</sup> Based on 3.9 GW of installed capacity in 2030 (as explained in paragraph 5 and based on an 80% Capacity Factor) and 248 GW of installed capacity in 2050 (as referred to in the report referenced above [9]).

The CCSA would only support further strengthening of governance proposals and enforcement measures on the principle that they were applied in relation to achieving greenhouse gas emissions reduction targets and not applied to sub-targets such as the 27% renewables target. In the view of the Association, further enforcement measures applying to technology-specific targets could compromise Member State responsibility for their national energy mix and risk increasing the costs of decarbonisation to UK consumers.

In order for CCS to fulfil its value to the UK energy system, it is important that EU level governance does not discourage or prevent investment in CCS at the level needed. Ultimately this could reduce the ability of the UK to roll-out CCS across industrial sectors and could reduce the potential to achieve negative emissions from biomass and CCS (BECCS). Combined, these impacts would put at risk the achievement of the UK's legally-binding climate objectives for 2050, increase the costs of decarbonisation to consumers, put UK industrial jobs at risk and threaten the sustainability and competitiveness of UK industry.

### **Drawing the case studies together: Looking forward**

*If National Energy and Climate Plans were to be the basis for a strengthened governance, who should be responsible for assessment, review and enforcement? How can transparency of that process be assured?*

It is clear that the assessment of National Plans is going to be a critical element of ensuring that they are credible, sustainable and affordable for consumers. Assessment will also be necessary to ensure that the measures contained with National Plans enable the achievement of the binding EU target for greenhouse gas emissions reduction.

Experience in the UK demonstrates the value in having an independent body retaining oversight of progress towards the fulfilment of climate objectives, and the CCSA strongly supports the work of the Committee on Climate Change in relation to UK carbon budgets and robust energy systems analysis. In order to achieve the same rigour at the EU-level, the CCSA would support either the Commission (supported by a panel of external experts) or a new independent body providing a non-binding opinion on National Plans. A similar principle is enacted in the CCS Directive with respect to the approval of CO<sub>2</sub> storage permits<sup>12</sup>, which could provide a useful counterpoint for such an approach.

*What role should regional co-operation play in any new governance system? How can regional co-operation help to overcome the potential tensions between national and EU policy objectives?*

Regional cooperation should play an important role in the new governance system where regional objectives are aligned and there is clear added-value to be achieved from cooperation.

For CCS, there is a clear rationale for enabling a regional approach to investments in CCS infrastructure such as CO<sub>2</sub> stores and shared transport solutions (e.g. pipelines or ships). There are a number of EU Member States that have introduced legislation preventing onshore storage of CO<sub>2</sub> within their own national territories (e.g. Germany) due to a variety of different factors. Whilst these Member States may not want to store CO<sub>2</sub>, there may still be a need for them to access other countries storage resource in order to achieve

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<sup>12</sup> Directive 2009/31/EC of the European Parliament and of the Council on the geological storage of carbon dioxide (commonly referred to as the 'CCS Directive')

their domestic decarbonisation objectives, for example in decarbonising energy intensive industries.

Member States such as the UK have access to vast storage space in the North Sea (or other offshore areas) that, with regional cooperation, could provide decarbonisation opportunities beyond an individual Member State. In this instance, regional cooperation could help to overcome some of the EU-level political barriers to CCS that have been seen over recent years, such as the lack of Member State support for including CCS in the European Council conclusions around the EU 2030 Framework (which the UK was in favour of). It could also present a significant economic opportunity to the UK.

In addition, the EU Renewable Energy Directive introduced the concept of intergovernmental agreements on renewables investment so that some Member States could support investment in renewables in other Member States as a means of meeting its own targets. This same concept should be developed and applied for CCS in the design of the new governance mechanism.

*Should a new governance framework be enshrined in legislation?*

If the new governance framework is enshrined in legislation it is important to ensure that the legislative proposal conforms with the high level principles of the 2030 Framework agreed by European Council, in particular, the need for a more technology-neutral framework.

The CCSA is concerned that adapting existing legislation could potentially lead to further disadvantages for CCS in the context of the broader energy policy framework. As an example, in earlier discussions the CCSA held with DG Energy, it was implied that the review of the EU Renewable Energy Directive could potentially provide the legislative basis for implementing the 2030 Framework targets. As CCS is not considered as an eligible technology under the Renewable Energy Directive, this approach could inadvertently disincentivise or not take account of CCS or its specific characteristics.

As a further example, there is a risk that CCS could be inadvertently discriminated against through EU energy efficiency targets. As the CCS process involves the use of energy to capture and store CO<sub>2</sub> emissions, it can lead to an increase in primary energy consumption on the processes it is applied to, e.g. power generation. Despite the fact that CCS typically reduces emissions by more than 90%, there is a risk that the associated additional energy consumption could mean individual installations fall short in achieving energy efficiency targets when fitted with CCS. Given the importance of CCS to securing a competitive future for many industrial installations in the UK (power and industrial sectors), the approach taken to energy governance needs to take account of the particular merits of CCS in spite of its associated energy penalty. The CCSA believes that the new governance system should focus on achieving emissions reductions at least cost and considering the broader value of low carbon technologies to the whole energy system.

2 October 2015



## Centrica Plc—Written Evidence

### Introduction

Centrica welcomes the opportunity to participate in the House of Lords inquiry into EU Energy Governance and to contribute our experience and expertise.

In general, we support the direction of EU energy policy and the creation of an Energy Union with its focus on completing the single market, ensuring member states are not vulnerable to supply disruptions and harnessing innovation through research and development in low carbon technologies. We also believe that in general, EU competence should be framework setting, rather than determining the detail. For example, we believe it is right for the EU to agree a level of ambition on reducing carbon emissions, but right for member states to develop specific policies to meet those targets.

In relation to the specific questions raised by the Committee in their Call for Evidence, we would make the following points:

#### Capacity markets

**Capacity Markets don't work against the energy market, but seek to achieve adequate electricity capacity:** The Commission remains sceptical about introducing capacity mechanisms, which it sees as market distortions. As long as the internal electricity market is not fully interconnected, electricity cannot flow freely across borders where it is needed. Until it becomes a reality, capacity will continue to be determined at national level, and supported by national capacity mechanisms. Over the past months, we have noticed that the European Commission has adopted a more positive approach, accepting capacity markets as long as they could have a European dimension (i.e. if open to cross-border participation). We fully support this approach and note that the GB capacity market is indeed open to the participation of interconnector capacity.

**The EU should not intervene in the detailed design of capacity mechanisms:** The Commission outlined in its recent Energy Market Design Communication the possibility of developing a 'reference model for a Capacity Mechanism' 'for use on a regional level'. We are not supportive of such an approach, which could result in more prescriptive rules being introduced when the Commission brings forward legislative proposals in 2016. Great Britain already has a capacity market which is a very efficient mechanism for achieving a pre-agreed level of capacity. 49.3GW of capacity was procured in the first auction of December 2014 for 2018/19 delivery and the intention is to buy 45.4GW in the second auction in December 2015 for 2019/20 delivery. We support the principles of the GB capacity market (technology neutral, market wide, open to cross border participation and demand-side response participation) and believe such principles could be a source of inspiration for other capacity markets in the EU. Unlike the capacity mechanism in some Member States, the GB capacity market has already achieved EU State Aid approval and is therefore due to run until 2025. It is essential that the Commission Energy Market Design proposals (due in 2016) and its ongoing enquiry into capacity mechanisms do not threaten the regulatory stability of the GB scheme.

#### Renewable energy targets

**The EU should avoid binding national renewable targets beyond 2020 and maintain a technology neutral approach to how individual countries meet their emission targets.** We support carbon abatement but as far as possible it must be cost effective and market driven in the interests of European energy consumers and the wider economy. In the end consumers will pay more if policy is too prescriptive about how decarbonisation is achieved. In our opinion, setting the right carbon price and then letting the market determine the most cost-effective technologies is the best approach to carbon abatement. On the subject of renewable targets specifically, we welcome Heads of States' decision to avoid binding national targets beyond 2020. The governance of the Energy Union should not challenge the decisions previously made. We agree with the UK's 'light touch' approach to the Energy Union governance, as presented in a non-paper earlier this year and reiterated in current Council discussions. In terms of meeting the EU-wide target of 27% renewables for 2030, we believe the Commission's push for more regional cooperation on renewable, for example where one country buys surplus energy from another or the development of joint projects may be preferable to national targets. The possibility of statistical transfers between 'over performing' and 'under performing' Member States (Article 6 of the Renewable Energy Directive) should remain available when the Directive is revised in 2016-2017.

#### Emissions Trading Scheme

**The EU should reform the EU ETS to ensure a meaningful carbon price for the post 2020 period.** The recent EU ETS Phase IV reform proposals are a welcome step but we do not yet believe they go far enough to be consistent with the EU's 2030 carbon abatement target. Our view is that a CO<sub>2</sub> price of over €40/t would be required by 2030 to incentivise sufficient switching into lower carbon technologies and other cost-effective forms of abatement. The current EU ETS price is around €8. Ideally the carbon price signal would be set on a pan European basis through the EU ETS but the scheme faces challenges. Until these challenges are addressed, the UK should maintain the carbon price floor to provide an effective price signal to support decarbonisation, since switching from coal to gas generation remains one of the lowest cost ways of reducing CO<sub>2</sub> emissions. It is important that national governments retain the ability to supplement the EU ETS price to provide a credible alternative.

#### Looking forward

**The National Plans to be developed by Member States should form the basis of the new governance system.** We support the development of national plans covering the five dimensions of the Energy Union. In our view, this will allow more coherence and will prevent the development of contradictory policies (such as the binding RES target, which undermined the EU ETS after the 20-20-20 targets were agreed). Such plans should provide businesses with a clear reference document outlining national implementing policies. They should also take a long term approach, guaranteeing some regulatory stability. We recognise the Commission's role in reviewing these plans and ensuring progress towards the 40% GHG reduction target and the 27% Renewable Energy target. To avoid an overly complex reviewing system, the Commission should select key indicators and assess Member States' progress on the outcomes rather than on the policy instruments.

**Delays in setting up the governance system will generate uncertainty about how EU measures will be implemented at national level.** This will undoubtedly delay progress in the transition to a lower carbon economy.

2 October 2015

## ClientEarth—Written Evidence

### Summary

Turning the Energy Union into reality will require the EU not only to reset the policy framework but also to get the governance right. Credible governance is critical for unlocking investor confidence and the other core conditions necessary to ensure reliable delivery of Energy Union objectives, in particular the EU's 2030 climate and energy targets.

In the following submission, ClientEarth responds to questions 1, 2, 4 and 6 of the House of Lords EU Energy and Environment Sub-Committee's inquiry on EU Energy Governance.<sup>13</sup> In summary, it is possible to have an effective governance system that allows for the overall achievement of EU energy and climate objectives while providing necessary flexibility to Member States and respecting their freedom to determine their energy mix.

Due to increasing interconnectedness between Member States' energy systems, and the potential to maximise efficient resource sharing, power system adequacy issues can no longer be addressed solely at national level. In combination with more effective use of the Commission's State aid authority in line with 'good governance', an EU governance system can set a framework to optimise the use of national capacity mechanisms to ensure an equal playing field for energy efficiency and demand-side response, storage and interconnections, and to minimise competitive distortions.

A credible Energy Union Governance System can also contribute towards creating a reliable, cost-effective, investor-friendly environment for achieving Energy Union objectives, as well as the 2030 targets. As a prerequisite, however, the governance system needs to be firmly anchored in legislation, and conform to the principles of good governance. A simplified and streamlined planning and reporting regime that sits within a legislative framework, with binding and soft elements where necessary, is not inconsistent with Member States' right to flexibility over their national energy mix.

In particular, where objectives relate to higher level or long term objectives associated with the Energy Union (e.g. 2050 decarbonisation) more generally, the need for flexibility is much stronger. At the very least, planning and reporting must reinforce the 2030 targets and the implementation of measures embedded in a revised 2030 acquis (e.g. revised directives on energy efficiency and renewable energy). Without effective and binding planning, targets become harder to achieve and without effective and binding reporting it is impossible for the Commission, as well as other stakeholders, to monitor EU progress. There are a number of different legal options for embedding 2030 planning and reporting into legislation while ensuring sufficient flexibility for Member States and respecting the national energy mix.

While Commission will need to monitor both procedural and substantive compliance with the new governance mechanism, there is a clear need for other actors at both national and EU level to play a significant role in the operation of the Energy Union governance system. There is a strong case for enhancing the role of independent expert information to assist the EU Institutions and Member States. In this sense, the UK's own Climate Change Act, which makes effective use of an independent expert Climate Change Committee, is instructive.

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<sup>13</sup> ClientEarth's research and analysis on EU climate and energy governance has been conducted alongside that of other expert organisations such as Ecologic and IDDRI.

*Question 1: How might the development of some form of governance system mitigate any impact of separate national capacity mechanisms on the EU's energy policy?*

By their nature, most capacity mechanisms meet the conditions to qualify as State aid within the meaning of Article 107(1) TFEU.<sup>14</sup> They are therefore subject to the Commission's exclusive competence to approve derogations from the general prohibition of State aid and to decide on their compatibility with the internal market.<sup>15</sup>

The Commission has a wide discretion in declaring when capacity mechanisms are compatible with the internal market. The scope of such discretion is limited by the reliance of the Commission on soft-law instruments - typically guidelines - which are intended to clarify how it intends to use its State aid powers. The *Guidelines on State aid for environmental protection and energy* for the period 2014-2020 (the 'EEAG') set out assessment criteria for evaluating the compatibility of capacity mechanisms with the internal market.

Although the Guidelines are non-binding expressions of policy by the Commission, they have great normative force and are binding on the Commission itself.<sup>16</sup> Specifically, the EEAG require the introduction of capacity mechanisms to be considered in the light of other EU policy aims, such as avoiding the distortion of competition and free trade, preventing the fragmentation of national energy markets, and driving the EU's decarbonisation objectives.

*EU State aid law does not currently align with the climate and energy agenda*

While State aid rules can be a highly effective governance tool to set out when capacity mechanisms can be legitimate, if used ineffectively, they can exacerbate the effects of separate national capacity mechanisms on the coherence of the EU's energy policy, with huge implications for climate and energy governance more generally.

In particular, there is a glaring policy inconsistency between the Commission's State aid policy and the EU's climate and energy goals. The assessment criteria laid down in the EEAG do not provide the Commission with sufficient discretion to prevent Member States from introducing ill-designed capacity mechanisms that risk favouring fossil fuels and passing high energy costs on to consumers.

Although the EEAG do not disregard the role of demand-side resources or interconnections, they do not place them on an equal footing with supply-side resources. In addition, the Commission has failed to provide for a common methodology for assessing power system adequacy and security.

In the absence of a more coherent approach, Member States are relatively free to assess resource adequacy according to their own national reliability standards. It follows that the diversity of approaches used to undertake adequacy assessments risks underestimating the

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<sup>14</sup> For a measure to amount to State aid, it must: (i) Involve a transfer of aid through State resources; (ii) entail an economic advantage for undertakings (companies); (iii) distort competition by selectively favouring certain beneficiaries; and (iv) have an effect on intra-Community trade.

<sup>15</sup> State aid - as part of EU Competition law rules - fall within the exclusive competence of the Union. Note that capacity mechanisms can also be classified as measures providing compensation to undertakings for their operation of services of general economic interest within the meaning of Article 106(2) TFEU. The possibilities of such a qualification are yet very limited.

<sup>16</sup> Case C-313/90, *CIRFS v Commission*, [1993] ECR I-I 125, para. 36; Case C-351/98, *Spain v Commission* [2002] ECR I-031, para 53.

capacity value of demand-side measures, variable renewables, and interconnections, and also the availability of both combined cycle gas turbine (CCGT) and coal-fired plants. This has the potential to render meaningless the various criteria for assessing the compatibility of a capacity market intervention with the internal market, and calls the entire rationale for the introduction of capacity mechanisms into question.

*Good governance in the application of EU rules is necessary for mitigating negative impacts of separate national capacity mechanisms on the EU's energy policy*

Despite their defects, State aid rules are capable in principle of coordinating separate national capacity mechanisms and ensuring that support schemes are introduced in ways so as not to violate EU climate and energy policy aims.

To that end, State aid rules must be underpinned by the principles of good governance, namely effectiveness, transparency, accountability, legitimacy, flexibility, policy coherence and certainty. However, at this stage of development of the internal energy market the Commission's governance of State aid policy does not conform to these key principles.<sup>17</sup>

The most prominent deficiencies in this regard are the above-mentioned lack of policy coherence in relation to EU climate and energy goals and the lack of transparency and accountability. Much of the Commission's exercise of State aid power occurs behind closed doors, especially during the State aid pre-notification and investigation procedures. Civil society is severely restricted from enhancing the effectiveness of State aid procedures and from actively engaging with the development of State aid policy. This significantly undermines the legitimacy of State aid policy in the energy sector.

These deficiencies in good governance need to be properly addressed at EU level. Enhanced State aid policy will ensure that Member States fully comply with the Commission's authority in relation to resource adequacy and thereby incentivise them to improve the design of their existing or planned capacity mechanisms.

For the purpose of policy coherence and market efficiency, the Commission needs to provide guidance in relation to the assessment criteria laid out in the EEAG, based on the principles of necessity and proportionality, which capacity mechanisms should meet. Specifically, a common methodology to assess adequacy issues is required to promote policy coherence, without questioning the right of the Member States to introduce capacity mechanisms. Only an assessment which takes into account the potential benefit provided by interconnectors and fully reflects the contributions of demand-side response and storage will prevent an over-estimation of a resource adequacy problem justifying the introduction of capacity mechanisms in Member States.

Because power system adequacy issues can no longer be addressed solely at national level, the EU is well placed to ensure that national capacity mechanisms do not go beyond what is necessary, and are only introduced as a last resort, (i.e. when less distortive measures are insufficient and the potential for energy efficiency and demand-side response is exhausted or constrained). Bringing State aid policy in line with the principles of good governance will bridge the gap between the EEAG and climate and energy goals, and, more specifically,

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<sup>17</sup> ClientEarth (2015). The effect of State aid governance on EU climate and energy policy. Available at: <http://documents.clientearth.org/wp-content/uploads/library/2015-08-26-en-ce-aoleary-the-effect-of-state-aid-governance-on-eu-climate-and-energy-policy.pdf>.

guarantee that the introduction of capacity mechanisms does not contradict the aims of moving towards an internal energy market in line with long-term decarbonisation objectives.

*Question 2 – Part 1: How could a governance mechanism assist the EU to deliver its stated policy, including not only the 27% renewable target but the overarching 40% emissions reduction target which relies in part on the renewables target?*

A credible governance system can contribute towards creating a reliable, cost-effective, investor-friendly environment for achieving the objectives of the Energy Union, as well as the achievement of the 2030 targets. As a prerequisite, however, the governance system needs to be firmly anchored in legislation and conform to the principles of good governance that, to a great extent, underpin the current 2020 regime.

#### *Political drivers of the governance debate*

A number of factors are driving the current EU climate and energy governance debate:

- assertion by Member States over their national energy mix, leading to a shift away from nationally binding renewable energy targets;
- the increasing focus on 'streamlining' and 'better regulation'; and
- as the energy transition enters a new phase, a more integrated approach to climate and energy policies is needed.

The challenge is to design the governance system, within these constraints, in a way that: 1) adequately drives greenhouse gas (GHG) emissions reductions and the expansion of renewable energy and energy efficiency - in essence, ensuring the delivery of the 2030 targets; and 2) helps ensure achievement of broader Energy Union objectives.

#### *How can governance help deliver the 2030 targets?*

Credible governance is critical for unlocking investor confidence and the other core conditions necessary to ensure reliable delivery of the EU's 2030 targets. Although the 2030 GHG target remains nationally binding, the move away from binding national targets for renewable energy has increased the pressure to ensure this target is achieved by other means - particularly through an effective system of planning and reporting. However, if excessive or poorly designed, streamlining could weaken monitoring and accountability, further compromising the EU's ability to ensure delivery of EU climate and energy targets and Energy Union objectives.

Any planning and reporting regime must conform to the principles of good governance, namely: transparency, effectiveness, accountability, legitimacy, flexibility, certainty and policy integration.<sup>18</sup> In the October 2014 Conclusions,<sup>19</sup> the European Council stated that post-2020 governance should as a minimum be reliable, transparent and predictable. In addition, the European Council mandated that the post-2020 governance regime should "build on the

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<sup>18</sup> ClientEarth (2014). EU Climate and Energy Governance Health Check. Available at <http://www.clientearth.org/reports/141127-eu-climate-and-energy-governance-health-check.pdf>.

<sup>19</sup> European Council, Conclusions on 2030 Climate and Energy Policy Framework (23 and 24 October 2014), SN 79/14

existing building blocks;" essentially a call to maintain conformity with core principles of good governance that underpinned the 2020 regime.

The Conclusions also state that the governance system will simplify and streamline the separate planning and reporting strands (those dealing with, eg. renewable energy and energy efficiency etc.); with greater emphasis henceforth being placed on Member States' National Energy and Climate Plans (National Plans). If this simplifies and reduces the administrative burden under current reporting regimes, it is to be welcomed. Even within the 2020 framework, significant deficiencies exist: duplication exists across several different areas, reporting is fragmented in time and content, and is inconsistent across different Member States. In addition, more could be done to ensure that information collected across policy areas is used more effectively in the decision-making process.

Post-2020 planning, monitoring and reporting needs to be anchored in EU legislation and must reinforce the 2030 targets and the implementation of measures embedded in a revised 2030 acquis (e.g. revised directives on energy efficiency and renewable energy<sup>20</sup>). Without effective and binding planning, targets become harder to achieve and without effective and binding reporting it is impossible for the Commission, as well as other stakeholders, to monitor EU progress.

Robust monitoring based on key indicators will be an important tool in ensuring the Member States and the EU as a whole are able to meet the 2030 GHG emissions target. While much of the GHG target will be covered by the ETS, it will not likely drive sufficient investment in renewables for the foreseeable future. Furthermore, ambition in the non-ETS (the Effort Sharing Decision, or ESD<sup>21</sup>) sectors will also rise substantially compared to 2020 (30% by 2030 compared to 2005). Member States will be required to achieve ESD emission reductions without using international offsets from outside the EU, increasing the scale of the challenge of achieving real emissions in the sectors covered by the ESD. In light of these strengthened commitments, Member States must be held accountable for making progress in these sectors. In particular, planning, reporting, monitoring and compliance must be strengthened consistent with good governance, ensuring sufficient progress towards the target, through course correction if necessary. The fact that the renewable energy target is non-binding at national level must not be used as a reason to weaken the ability to monitor progress towards the GHG target.

To the extent that planning and reporting encompasses higher level objectives associated with the Energy Union (e.g. integration of a 2050 decarbonisation perspective into the Energy Union), maintaining simplicity and flexibility will be key. Therefore, legally binding elements such as those that are needed for ensuring achievement of the 2030 targets would be inappropriate. Nevertheless, in order to facilitate effective dialogue and quality information, the governance system still needs to be firmly anchored in legislation. In this regard, the UK's own Climate Change Act is somewhat instructive. Further below, within our answer to Question 6, we elucidate more on this, and what a legislative framework for the Energy Union Governance System might look like.

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<sup>20</sup> Namely, Directive 2009/28/EC on the promotion of the use of energy from renewable sources and amending and subsequently repealing Directives 2001/77/EC and 2003/30/EC; and Directive 2012/27/EU on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC.

<sup>21</sup> Decision No 406/2009/EC on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020.



*Essential elements of post-2020 planning and reporting*

It is essential that the post-2020 planning and reporting arrangements for national climate and energy - to the extent that they relate to the 2030 targets - continue to be binding and conform to good governance principles. This requires that the governance system incorporate a number of key features, including, inter alia:

- binding templates detailing data requirements that allow for effective monitoring, progress comparison, and EU level aggregation;
- a legal mechanism for enabling the Commission to ensure that the sum of Member State effort is sufficient to enable the EU meet its 2030 targets;
- a legal mechanism for ensuring national accountability for progress;
- transparent access to relevant documentation held at EU and Member State levels;
- regular status updates on Member States' and Commission's actions;
- regular updates of plans, if necessary;
- meaningful participation of stakeholders in the plan-making processes; and
- a clear long-term perspective to 2050.

The extent to which domestic laws are put in place to ensure target achievement could also form part of the reporting obligations.

As already mentioned, with regard to higher level objectives associated with the Energy Union the need for simplicity and flexibility will be greater. To this extent, the National Plans should provide a basis for open discussion for how to achieve EU climate and energy objectives.

*Question 2 - Part 2: How robust could a governance mechanism be without compromising Member State responsibility for their national energy mix?*

There is little doubt that the principle of flexibility with regard to the national energy mix is now a central driver in shaping the climate and energy governance debate - with both the UK and Germany emphasising this issue. However, a planning and reporting regime that remains neutral on choice of energy mix but is firmly anchored in legislation, with binding elements where necessary, is not inconsistent with Member States' right to flexibility over their national energy mix.

While Member States can undoubtedly lay strong claim to a right to flexibility over the national energy mix, this does not allow them to deviate from the EU's climate objectives or to prevent the EU from exercising its Treaty mandate to take action to secure European energy security, sustainability and competitiveness, and to combat climate change.<sup>22</sup>

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<sup>22</sup> The 2013 case *Poland v Commission* (Case T-370/11) underscored this right, but it also confirmed that it does not extend so far as to prohibit legislation adopted under article 192 TFEU; the legal base on which the

The European Council has decided not to adopt nationally binding renewable energy targets after 2020 but has agreed to adopt a "binding EU target." Given that the 2030 EU level target cannot be delivered by individual Member States acting alone, the principle of subsidiarity provides an appropriate conceptual framework for determining the legal boundaries of national energy flexibility and the EU's mandate to act on climate, as well as promote renewable energy and energy efficiency, in a spirit of solidarity.

Provided the EU's action is proportionate, Member States' right to energy flexibility does not empower them to lawfully undermine the EU's capacity to meet its 2030 targets or ignore their collective obligation to meet those targets. Indeed, the 2030 renewables target will be binding - even if unenforceable against - on the Commission, Parliament and Council, not to mention wider EU agencies such as the European Environment Agency (EEA), the Joint Research Council (JRC), the Agency for the Cooperation of Energy Regulators (ACER), the European Networks of Transmission System Operators for Electricity and Gas (ENTSO-E/G) and the European Investment Bank (EIB).

If the EU target is to be credibly rendered 'binding' it is essential that the target be articulated in legislation along with an appropriate planning and reporting regime necessary to support its achievement. At the very least, the Commission (or another independent expert body) should be able to issue recommendations and/or policy advice in response to plans and reports by Member States. Furthermore, Member States should be required to update plans where they are falling behind. Lastly, the governance mechanism itself should be capable of responding to policy failure, through course correction if necessary.

While it would be very difficult to incorporate 'hard' compliance mechanisms specific to the 2030 target for renewable energy, it would be possible (and indeed all the more important) to ensure that relevant procedural mechanisms are clear, quantitative, objective and transparent.

It must also be underscored that in, to ensure proper planning and process, the Energy Union Governance System needs to at the very least be anchored in legislation. However, where objectives relate to higher level or long term objectives associated with the Energy Union more generally, the need for flexibility becomes greater.

*Question 4: If National energy and climate plans were to be the basis for a strengthened governance, who should be responsible for assessment, review and enforcement? How can transparency of that process be assured?*

The consolidation of planning and reporting places National Plans centre-stage in the governance mechanism. Their effectiveness in contributing to the achievement of GHG and renewables targets will in large part depend upon whether progress is really driven by the National Plans and the reporting and feedback processes of which they form a part.

The Commission will be the key actor in monitoring both procedural and substantive compliance under the new governance mechanism. However, given the difficulty it has so far experienced - even in the context of a 2020 package based more in 'hard' law - there is a clear need for other actors to play a stronger role in the operation of the 2030 governance mechanism.

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primary GHG emissions target (and the Effort Sharing Decision and European Trading Scheme aimed at achieving those targets) is based. In other words, the GHG emissions target is unaffected.

Here, then, transparency will be instrumental. First, it will amplify the learning and information-gathering aspects of governance which will allow for the improvement of practice over time. Secondly, monitoring by civil society of Member States' reporting submissions may be critical in scrutinising the accuracy of those submissions and in bringing pressure to bear on Member States where there is (a risk of) non-compliance. National Regulatory Authorities will also need to play a stronger role in providing information, in addition to ensuring national level compliance with relevant market rules.

The Commission can assure transparency through the following:

- Development of binding templates for planning and reporting;
- The production of regularised reports, based on independent expert advice, on progress in achieving the 2030 targets in its State of the Energy Union; and
- A Transparency Platform that is continually kept up to date with useful and relevant information, including on target achievement and enforcement.

The other EU Institutions should also have an explicit role in the governance mechanism. At the least, this might involve an annual address by the Commission to the Council and the European Parliament to ensure they are informed and empowered to take action.

There is also a case to be made for an enhanced role for participation of independent experts to assist the Institutions, including the Commission, in driving policy forward. This could be achieved through providing an enhanced role for an existing body (e.g. the European Environment Agency) or creating a new body (e.g. a Climate Risk Observatory<sup>23</sup>). Such a body would be able to provide authoritative and independent advice to Member States and the EU Institutions on risks and opportunities associated with current approaches (e.g. policies and measures) being taken by the National Plans.

*Question six: Should a new governance framework be enshrined in legislation?*

Post-2020 planning and reporting must be anchored in EU legislation and must reinforce the 2030 targets (including implementation of measures embedded in a revised 2030 acquis), in addition to supporting achievement of Energy Union objectives.

*The alternative to governance enshrined in legislation*

The alternative, which is actively being discussed at the moment, is a 'soft' non-binding governance approach (which the EU terms the Open Method of Coordination, or OMC). In response to the possibility of such an approach, ClientEarth has explored the impact of OMC-style governance.<sup>24</sup>

Where OMC has been applied in other (typically less mature) policy areas, results have been mixed. ClientEarth concludes that OMC is not only a weak form of governance, but more specifically that it is incapable of providing a credible and transparent framework for ensuring the delivery of concrete objectives. This is essentially because the key minimum criteria for

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<sup>23</sup> See E3G (2015). The Energy Union needs a new approach to policy-making. Available at [http://www.e3g.org/docs/The\\_Energy\\_Union\\_needs\\_a\\_new\\_approach\\_to\\_policy\\_making.pdf](http://www.e3g.org/docs/The_Energy_Union_needs_a_new_approach_to_policy_making.pdf).

<sup>24</sup> ClientEarth (2015). 2030 Climate and Energy Governance: Assessing an OMC Approach. Available at <http://www.clientearth.org/reports/2030-climate-and-energy-governance-assessing-an-omc-approach.pdf>

accountability, transparency and stakeholder engagement supported by a legislative framework is missing under an OMC approach.

A stronger legal framework incorporating at least a mix of hard (for the delivery of the 2030 targets) and soft (for the delivery of Energy Union objectives) measures anchored in legislation is needed to balance Member State flexibility. Under a purely soft approach, additional policy interventions or governance innovations – either by individual Member States or the Commission – down the line will likely be needed. This was indeed the experience under the European Semester (which used a weak OMC-style approach to governance), where fiscal crises caused by the lack of binding rules for keeping imbalances in check inevitably led to a more rules-based system.

*Legislative options for a simplified and streamlined governance system*

As highlighted by other submissions, there are a number of different legal options for embedding 2030 planning and reporting into legislation.<sup>25</sup> ClientEarth recently assessed several different options including inter alia:

1. maintaining the status quo (with a separate Renewable Energy Directive (RED), Energy Efficiency Directive (EED), and Effort Sharing Decision (ESD));
2. significant change within existing legal instruments by streamlining existing, continuing and/or new planning and reporting obligations into the Monitoring Mechanism Regulation;<sup>26</sup> and
3. more radical change through streamlining into a dedicated new governance instrument.

Option one would, overall, maintain the current legislative architecture of the RED, EED and ESD, while undertaking a simplification exercise to get rid of non-essential reporting lines and synchronise timelines. This would require a minimal streamlining between the different instruments, yet would have a powerful symbolic and practical value, not least in unlocking investor confidence by sending the clearest possible signal concerning the stability of Europe's commitment to the energy transition. It would also demonstrate commitment to constructing a governance system on the existing building blocks of the 2020 framework.

The second option would see the ESD become the centralised basis for planning and reporting on the achievement of the 2030 targets. This would have some practical legal value, especially given that the GHG target is nationally binding. It would also have practical value, given that the ESD is already streamlined with other climate planning and reporting obligations (e.g. international obligations under the UN Framework Convention on Climate Change) under another instrument called the Monitoring Mechanism Regulation (MMR). Under this model, reporting requirements are contained in the ESD itself, while further

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<sup>25</sup> For a full analysis of legal options, see ClientEarth (2015). Streamlining Climate and Energy Planning and Reporting: Understanding the Options, Risks and Opportunities. Available at <http://documents.clientearth.org/wp-content/uploads/library/2015-09-24-streamlining-climate-and-energy-planning-and-reporting-ce-en.pdf>.

<sup>26</sup> Regulation No 525/2013 on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change and repealing Decision 280/2004/EC.

standards for reporting (e.g. binding templates) are laid out according to provisions contained in the MMR.

The model of streamlining demonstrated between the ESD and the MMR - with the former cross-referencing the latter - could be replicated for both the RED and the EED. This would allow reporting requirements to be maintained in their respective instruments, while ensuring a high degree of streamlining and simplification into one instrument through cross-referencing to the MMR.

Under the third option, an entirely new instrument could be created to contain the streamlined and integrated planning and reporting arrangements. This option could result in the creation of a more fully developed legislative home for wider governance, allowing institutional innovation in, for example, inputting information into the policy process, providing for more transparency at EU level and the potential for a new vision of streamlining.

There are opportunities and risks to each of the above approaches. Opportunities include maintaining transparency for investors and other stakeholders, emphasising political commitment to achieving the targets, and increased coherency between Member State and sectoral approaches. Risks range from insufficient streamlining and integration, to the loss of clarity, detail and comprehensiveness, with knock-on effects for investor confidence and accountability.

#### *Accommodating different policy objectives in the Energy Union Governance System*

It is necessary to see the 2030 targets as part of broader Energy Union governance, which encompasses higher level and longer term objectives. In order to ensure further integration and policy coherence, there is a need to bring these strands together. However, as echoed by other submissions to this inquiry, within streamlined National Plans a certain level of separation, which does not necessarily lead to duplication, will still be needed to differentiate between the 2030 targets and higher level Energy Union objectives.

As highlighted by IDDRI and Ecologic, the Energy Union Governance system could encompass a planning and reporting system that includes a modular approach, differentiating between high level reporting on the overall achievement of the 2030 targets; planning and reporting on specified measures that require closer monitoring; and planning and reporting with a 2050 low carbon perspective. Differentiation would be represented by the level of detail mandated for planning and reporting under each 'module', and the rules that are applicable to each of the processes.

Despite the varied legal nature of different levels associated with a modular approach, there would be value in establishing such a system within a legislative framework. This is the approach taken by the European Semester, which is composed of different levels of obligation depending on which of its three pillars are being treated, including:

- The EU 2020 Integrated Guidelines under the Europe 2020 Strategy;
- The Stability and Growth Pact (fiscal issues); and
- Macroeconomic Imbalances.

Within the Europe 2020 Strategy, the Commission merely assesses national programmes, and then with the endorsement of the European Council it issues country-specific recommendations. The Member States should then take the recommendations into account in developing and implementing national budgetary and reform policies. This is in contrast to the treatment of fiscal soundness and microeconomic imbalances, where the EU has a stronger role and the issues are of more consequence. For these latter policy areas, legally binding provisions for corrective measures and non-compliance are stronger. Despite these differences, however, planning, reporting and surveillance under the European Semester are embedded in an overall legislative architecture so that process is respected and so that the system is sufficiently transparent to the EU Institutions and outside stakeholders.

The above suggests that an appropriate level of differentiation between legally binding and soft provisions can co-exist within the Energy Union Governance System.

2 October 2015

## **Dr. Simona Davidescu, Dr Ralitsa Hiteva, Dr. Tomas Maltby— Written Evidence**

### *Response to Case Study Two (national energy mix): Renewable energy targets*

The October 2014 European Council agreed that the EU should cut its greenhouse gas emissions by at least 40% by 2030 compared to 1990 and that this should be delivered through a range of measures including renewable energy: “An EU target of at least 27% is set for the share of renewable energy consumed in the EU in 2030. This target will be binding at EU level.” This contrasts to the 20% renewable target by 2020 which has binding national targets for each Member State.

*How could a governance mechanism assist the EU to deliver its stated policy, including not only the 27% renewables target but the overarching 40% emissions reduction target which relies in part on the renewables target?*

In our research on Romania and Bulgaria we have found that governance mechanisms in the form of binding national targets played a significant role in these countries reaching their national 2020 renewable targets by 2013, seven years early. This was not an unconditional success though as support for renewable energy was withdrawn as soon as the targets were reached. Energy governance at the time was focused on facilitating the development of wind and solar projects through cost and risk shifting measures like the reallocation of risk from producers to electricity distribution companies. There was a failure to address other important issues related to energy systems in these countries. Specifically there are important systemic and technical barriers to energy system change and a transition towards a low carbon energy future. These include requiring and providing support for electricity network development and upgrade (both transmission and distribution). This incurs substantial costs, which has so far been prohibitive in terms of introducing higher levels of intermittent renewables in both countries.

The strategic importance of the technical inadequacy of the electricity grid (i.e. the grid capacity to carry variable wind and solar power) in both Romania and Bulgaria has led to the full reversal of all incentives introduced through EU legislation, only a few years after they came into force. Therefore a combination of hard legislation for the development and upgrade of national electricity networks is required to complement and enable existing 2030 targets. For example, this could include specifying technical standards for national electricity grids, not only in terms of compatibility with other countries but also in terms of technical performance in relation to intermittent renewables and energy demand (i.e. the introduction of smart grids technologies).

On the other hand countries like the UK have seen a growing interest and increase of non-traditional business models for renewable energy and energy with lower greenhouse gas emissions. These may include innovative governance mechanisms, commonly referred to as social innovations, taking the form of community energy projects and local initiatives, as well as non-traditional mixtures of public and private funding and finance. These non-traditional business models for energy projects and services tend to be non-centralised and ad-hoc, and are successful where there is local capacity to organize and/or need for the provision of energy services irrelevant of the strength of the economic case for them (i.e. driven by issues such as environmental considerations and fuel/energy poverty and vulnerability). However, such projects often struggle to sustain themselves as they rely on individuals’

capacities (and could often involve volunteering) and mostly use support from local authorities.

Therefore, a governance mechanism which provides flexibility and support for non-traditional business models for energy services, and which builds on existing capacities at subnational levels (i.e. local, urban, municipal, communities) could contribute to the continued growth of renewable projects, irrelevant of national targets. Such a governance mechanism could include a variety of tools like the introduction of regional and/or municipal funding mechanisms for the development of non-traditional renewable energy projects zones, in the spirit of Catapult Centers in the UK and creative zones. These government and local authorities' sponsored initiatives provide financial incentives, provision of capacity building activities with focus on greenhouse gas emissions reductions, and shared learning between individual projects.

Such governance mechanisms could provide vital capacity building opportunities for all EU countries; for example in Bulgaria and Romania there are currently very limited incentives and measures in support of renewable projects, for example the lack of community energy projects; and address the problem of limited domestic support for these projects which we argue is necessary for coalition-building around renewable technologies and the social acceptance of a potential increase in the short term cost of energy. Such a governance mechanism would require an active role for national and EU energy regulators in ensuring consistency in the treatment of non-traditional business models and support their emergence and diffusion. Furthermore, non-traditional business models may cross sector boundaries and include areas that are not regulated. This will require a higher level of regulatory flexibility than currently experienced in most Member States.

Our research on the newer Member States (in particular Romania and Bulgaria) has shown that the key mechanism for effective implementation and compliance with the EU's Directive on the promotion of the use of energy from renewable sources (EU 2009/28/EC) has been the binding targets at national level. Before these targets were introduced, the legal transposition alone of previous 2001/77/EC Directive did not have any significant effect in practice in terms of level of investment or growth in the renewable energy sectors. The result was a case of formal compliance without substantive implementation. Once the targets were negotiated with individual Member States, there was a significant change in the way political elites addressed policy implementation. New and extensive incentives were put in place to promote investment: for example in Bulgaria long-term contracts, set-up grants, and obligatory, zero cost and priority connection to the grid were implemented. In Romania the differentiation of green certificates on the basis of technology, mandatory annual quotas for green energy, and guaranteed priority access to the grid created a thriving market.

An under if not completely unused mechanism is that of cooperation mechanisms between Member States and with third countries. The overproduction of renewable energy relative to targets explains why this mechanism is unlikely to be used to meet 2020 targets. Joint projects between member states and third countries have the potential to assist in the meeting of EU 2030 renewable targets whilst developing economic partnerships with neighbouring countries. There is also the option for one member state to provide financial support for a RES project in another member state and count (part of) the project's energy production towards its own efforts. This can be efficient in taking advantage of renewable energy potential and directing funding to where it can be most effectively used.



*How robust could a governance mechanism be without compromising Member State responsibility for their national energy mix?*

The continued use of certain existing governance mechanisms would be key for the European Commission to be able to monitor non-compliance in particular Member States, especially in the case of a new EU-wide binding target for 2030. These included initial National Renewable Energy Action Plans (Directive 2009/28/EC, Article 4(1)) coupled with progress reports every two years (Article 22) which are only running until 2020 and 2021 respectively. Currently, if a member state falls behind its indicative trajectory then it is required to submit an amended national action plan (Article 4(4)). If binding national targets are not going to be used, and we believe they are effective, then it will still be important to regularly measure progress towards the EU target, and offer support where national planning is considered insufficient. National Renewable Action Plans do provide a governance mechanism that is designed with the acknowledgement that there are different, nationally specific, paths towards meeting the Renewable Energy Directive. Member States then retain sovereignty in deciding how to meet the EU's target, whilst offering strong support and guidance where necessary to provide a long-term planning perspective that can otherwise be lacking, and to measure and report on the implementation of plans. The mechanism needs to retain, and even strengthen, the existing 'hard measures' to enforce EU targets and retain obligations for Member States and sanctions for non-compliance in order to incentivise government focus on the issue, enforce implementation and prevent defection from this EU agreement, as well as to reassure member states that others are carrying a fair share of the burden. These sanctions include the Commission's right to launch infringement proceedings against non-complying member states, and the European Court of Justice's right to impose penalty payments. At present this can take several years before the non-compliance results in sanctions.

*Drawing the case studies together: Looking forward:*

*What are the implications of a strengthened EU approach to energy governance? What are the implications of not making swift progress towards a new – and clear – governance system?*

In the absence of national-binding targets for 2030, coupled with domestic price increases for energy and protest from the heavy industry energy consumers, countries which have already reached their 2020 targets, such as Romania and Bulgaria, have started to dismantle their incentive systems, creating an environment of extreme uncertainty for businesses and the withdrawal of some key investors in renewables. Furthermore, the impact of these developments on the energy-intensive industries has prompted certain Member states (even frontrunners such as Germany) to use feed-in-tariff exemptions which have effectively lowered energy costs for energy-intensive industries. In this context, the coupling of RES targets with the 40% emissions reduction target is important but not sufficient for keeping RES investment on the agenda. For example, the new member states have benefited from EU-wide greenhouse gas emissions targets and the solidarity principle by not having to make any cuts due to the collapse of their industry compared to 1990 emissions levels. Moreover, due to the current economic crisis, investment in research and new technology have been cut across the EU, even in Germany, which is the third largest wind energy market after China and the US.

*Should a new governance framework be enshrined in legislation?*

A clear and coherent policy framework is essential for investors in the RES sector. Most companies investing in renewables across the EU are also investors in other types of energy and their move to renewables is partly due to the attractiveness of the incentive systems, prompted by the national binding targets. As incentive systems are being dismantled across the EU, further commitment from the business sector has been linked to a stable legislative framework, enforceable EU-level targets and the linking of energy and climate change policies.

Newer Member States like Bulgaria and Romania have limited support and capability to consider greenhouse gas emissions as part and parcel of energy governance at the national level. In many respects, greenhouse gas reduction policy is considered an external issue introduced by EU Directives and Policy. It is then important that a new governance framework be enshrined in EU legislation and transposed to the national level. In newer Member States EU legislation, especially RES Directive played a decisive role in the development of renewables like wind and solar power. However, although these countries were quick to transpose EU Directives, they tend to lack sufficient domestic support for these energy sectors and a lot of the legal and financial incentives for wind and solar were quickly removed once the targets for 2020 were achieved. Therefore the continued development of these sectors and learning about the reduction of greenhouse gases through energy policy in these countries will greatly benefit from “hard” legislation, such as direct targets.

2 October 2015

## Department of Energy and Climate Change—Written Evidence

Case Study One (national energy security): Capacity mechanisms are being introduced by some Member States in order to assure national security of supply.

- How might the development of some form of governance system mitigate any impact of separate national capacity mechanisms on the EU's energy policy
- How far can co-ordination of such mechanisms go before it becomes politically unacceptable?
- How has this tension between EU and national objectives been handled thus far?

Over the last five years capacity mechanisms have been one of the most examined areas of energy policy with the European Commission taking a keen interest in ensuring any impacts on the internal energy market are minimised. A series of actions and frameworks put in place by the Commission already function as a system of governance.

In November 2013 the Commission published their Guidance on public interventions in the energy market which covered generation adequacy and capacity mechanisms.<sup>27</sup> The Guidance included non-binding recommendations and a checklist for interventions to ensure these are compatible with the principles of the single market. In July 2014 the Commission published their updated state aid Guidelines for environmental protection and energy<sup>28</sup> (the EEAG), which include generation adequacy. The EEAG are binding as they form the basis of the Commission's assessment of compatibility of Member State measures with the Treaty of the Functioning of the EU for the purposes of state aid – without Commission approval capacity mechanisms that involve state aid are unlawful and cannot be implemented. The EEAG aims to ensure that when Member States introduce capacity markets they do not impede the functioning and development of the single market. The GB Capacity Market was assessed under these more stringent Guidelines and secured state aid clearance.

Earlier this year the Commission launched a sector enquiry into capacity mechanisms a draft report of which is expected before the end of the year for consultation, with the final report scheduled for summer 2016.<sup>29</sup> The enquiry will initially cover 11 Member States<sup>30</sup> and will aim to collect the views of Member States and industry stakeholders, identify design features that may distort competition between capacity providers and distort cross-border trade, promote competitive and market-based capacity mechanisms that complement the internal energy market, and ensure Member States respect state aid rules when designing and implementing capacity mechanisms.

On 15 July the Commission launched a consultative Communication on energy market design.<sup>31</sup> The consultation closes on 8 October and it is expected the Commission will use the evidence gathered to bring forward legislative proposals in late 2016. One of the Commission's main aims for the new market design is to provide an EU-wide framework for

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<sup>27</sup> [https://ec.europa.eu/energy/sites/ener/files/documents/com\\_2013\\_public\\_intervention\\_swd01\\_en.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/com_2013_public_intervention_swd01_en.pdf)

<sup>28</sup> [http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0628\(01\)&from=EN](http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52014XC0628(01)&from=EN)

<sup>29</sup> The UK is not one of countries included in the enquiry having secured state aid clearance under the new Guidelines.

<sup>30</sup> Belgium, Croatia, Denmark, France, Germany, Ireland, Italy, Poland, Portugal, Spain and Sweden

<sup>31</sup> <https://ec.europa.eu/energy/en/news/new-electricity-market-consumers>

national market interventions, particularly capacity mechanisms and renewables support schemes, so that there is more convergence in their design over time in order to minimise market distortions.

The Commission also set up the Electricity Coordination Group, which provided a forum for Member States to share best practice, explore pertinent issues relating to generation adequacy and capacity mechanisms, and encourage coordination. Following a two year hiatus and calls by the UK and others, the Electricity Coordination Group is being reconvened this autumn better focused to resume its collaborative functions.

We consider that Member States should look to work cooperatively with their neighbours to promote coordination both on the design of capacity mechanisms and on understanding the operational consequences of a number of national capacity mechanisms running in parallel. For example, it may be helpful for Member States to collaborate on issues such as generation adequacy assumptions for a highly interconnected region. Therefore, we are engaging closely with other Member States, particularly Ireland and France, with whom we are interconnected and who are looking to introduce capacity mechanisms, to share best practice, lessons learnt and ensure there are no negative spillovers in our markets. In future the governance system and the development of National Plans may provide a catalyst for and inform such co-ordination although it should not be a precondition for it.

One area where we are particularly keen on working with other Member States is how to open capacity markets to non-GB participation. We are the first EU Member State to allow interconnection to participate in our Capacity Market. Interconnectors will participate directly in the capacity auctions from 2015 and hold capacity obligations in a way similar to other capacity providers. We would be keen to work with our partners at EU level to share our experience and jointly identify and develop a comprehensive, collaborative approach to cross-border participation in national capacity mechanisms.

Our view is that given the diversity of the 28 Member State markets and their specific circumstances Member States must be able to introduce the capacity mechanism best suited to their national circumstances and energy market, at least cost to consumers. Issues such as market structure, geographic barriers, level of interconnection, degree of demand side responsiveness and generation mix should be taken into account as capacity mechanisms are designed. Attempts to force coordination, for example in the form of a blueprint model for a capacity mechanism, even if they could be agreed, would be unlikely to yield an outcome that would, adequately and at least cost to consumers, address the UK's (and to varying degrees other Member States') security of supply concerns.

*Case Study Two (national energy mix): Renewable energy targets*

- *How could a governance mechanism assist the EU to deliver its stated policy, including not only the 27% renewables target but the overarching 40% emissions reduction target which relies in part on the renewables target?*
- *How robust could a governance mechanism be without compromising Member State responsibility for their national energy mix?*

The Government played a leading role in securing the October European Council's agreement to the target of an at least 40% reduction in EU domestic greenhouse gas emissions by 2030 (the 'GHG target'). The Council agreed that the main EU instruments for

achieving the GHG target should be a well-functioning, reformed Emissions Trading System (ETS), and binding national reduction targets for the non-ETS sectors ('national GHG targets'). Other source specific EU legislation including a tightening of the existing binding emission targets for new car and van fleets will also play an important role in achieving the GHG target efficiently.

Ultimately the GHG target is what governs the level of emissions reductions that will be achieved by 2030. For most Member States and the EU as a whole, renewable sources of energy will be one of the most important low carbon options to help reduce greenhouse gas emissions.

The GHG target does not, however, rely on the renewables target, rather, the requirement to reduce GHG emissions should encourage Member States to pursue low carbon policies including on the promotion of renewable energy. In the power sector the carbon price will need to be flanked by additional low carbon measures (often at national level) encouraging on the one side to overcome barriers to the take-up of low cost emissions reduction, and on the other side the need for deployment and innovation to ensure that the EU reduces emissions at least cost over the long term.

An EU energy governance system can, alongside these EU and national measures, also help to ensure that the EU meets its long term climate and energy goals. For this to happen the governance system should ensure that Member States produce credible, long term National Climate and Energy Plans that are of consistent quality, developed in consultation with neighbouring Member States (with a particular focus on identifying and addressing cross border challenges and opportunities) and reported on regularly. It is also sensible for the Commission to use the governance system to track progress towards the EU's long term climate and energy goals and report back to the Council including through its State of the Energy Union reports to inform future policy choices.

The UK already has a strong track record in long term climate and energy planning, including through the UK Carbon Plan. The Government will continue to work with the Commission as it develops its proposals for the governance system and the National Plans.

The Governance system must not require Member States to go beyond the parameters agreed at the October European Council, for example by requiring Member States to set or agree to national targets in any area other than for the non-traded sector (although some Member States may of course choose to set their own domestic targets, as the UK does in respect of GHG emissions). The UK opposed the imposition of national renewables targets for 2030 not least because such targets would prejudice the cost-effective pathway to achieving 2030 emissions goals, and constrain the flexibility required to adapt to changing circumstances over time.

The National Plans should, however, set out clearly each Member State's policies and proposals to achieve 2030 national GHG targets, and to contribute to EU Energy Union goals, including on renewable energy and energy efficiency. This should include projections for renewables' share of national final energy consumption out to 2030, as part of a coherent strategy reflecting national circumstances and interactions between cost-effective decarbonisation, energy security and internal market integration. The projections would provide a non-binding but long term and credible trajectory against which Member State efforts could be assessed and monitored. It may be appropriate for Member States to set

out the trajectory in different scenarios, given the uncertainty in the factors – such as technology costs – used to determine the trajectory.

The EU also needs to avoid a lock-in of high carbon technologies over the long term. The Government considers that the National Plans should also indicate how national policies and proposals for the 2020s are consistent with a cost-effective pathway to the EU's 2050 emissions reduction goal. Retaining a longer term perspective will ensure sufficient focus is given to the importance of structural decarbonisation but also the development of less mature low carbon technologies such as carbon capture and storage.

*Drawing the case studies together: Looking forward*

- *What are the implications of a strengthened EU approach to energy governance? What are the implications of not making swift progress towards a new – and clear – governance system?*
- *If the National Energy and Climate Plans were to be the basis for a strengthened governance, who should be responsible for assessment, review and enforcement? How can transparency of that process be assured?*
- *What role should regional co-operation play in any new governance system? How can regional co-operation help to overcome the potential tensions between national and EU policy objectives?*
- *Should a new governance framework be enshrined in legislation?*

The achievement of the EU's long term climate and energy goals (as summarised for example, in the Commission's Energy Union Communication of February 2015), will require action at local, national, regional and EU level, from both the public and private sectors.

The new approach to governance should take into account the range of EU energy and climate goals, the interactions between them, and the number of different actors responsible for their delivery. It should as such be sufficiently strategic and avoid undue levels of prescription (for example on the implementation of policies at national level) while putting in place a system of sufficiently detailed, transparent and credible long term National Energy and Climate Plans that help to increase predictability for investors, and increase the robustness, consistency and coherence of Member States' strategies and measures for meeting their national emissions reduction targets and contributing to EU energy and climate goals.

It is important, however, not to consider the governance system in a vacuum. It should sit alongside and take an overview of a range of other EU instruments to help drive progress towards these goals. Historically the UK has taken a leading role in developing many of the EU instruments in this space, not least the packages of legislation on the internal energy market, the introduction of an EU wide carbon price, and greater collective ambition on greenhouse gas reductions.

Further integration of energy markets, enhanced energy security and increased decarbonisation efforts are, however, likely to require more coherent action at Member State and regional level, particularly in areas where a group of Member States are presented with a particular challenge or opportunity. Again, the UK has historically played a strong role

in a good example of such regional cooperation, the North Seas Countries' Offshore Grid Initiative, which was set up to explore the possible benefits of an offshore grid to support the development of renewables in the North and Irish Seas.

In many cases actions at national level will have cross border implications; and regional initiatives have the potential to increase overall efficiency and reduce costs. The new approach to governance can and should play a role in facilitating regional initiatives, including through the development of and consultation on National Plans, which could prove a useful catalyst for identifying and developing responses to cross border challenges and opportunities.

As the Government has already indicated in previous correspondence with the Committee on this matter, we do not, however, foresee the introduction of the governance system affecting the Commission's (current) competence to examine and comment on the details of national policies (for example, to ensure compliance with state aid rules and internal energy market legislation).

The Commission has an important role to play in assessing the National Climate and Energy Plans as part of a broader monitoring process and assessment of the EU's collective progress towards its long term energy and climate goals. In this role, the Commission should report on progress to the Council on a regular basis.

The governance system must, however, preserve Member State flexibility to work towards agreed EU goals while reflecting national specificities, and respect Member States' fundamental rights and responsibilities. As alluded to above, to a significant degree the design of national energy markets and national interventions are already driven - or at least shaped - by EU law with the potential for enforcement in the event of non-compliance. It is, however, the right and responsibility of Member States to take the necessary measures to ensure their energy supply, to determine the conditions for exploiting their energy resources and to make their choice between energy sources. As these are ultimately choices for Member States, ownership of the National Plans should rest with the Member States themselves.

The Government does not currently foresee a need for the governance system to be enshrined in legislation. It would need to see clear proposals to understand the basis, scope, and focus of such legislation before taking a firm view. Neither the original Commission proposals from January 2014, nor the October European Council agreement envisage the need for a legislative system.

1 October 2015

## E3G—Written Evidence

### *Introduction*

The House of Lords EU Energy and Environment Subcommittee is addressing the topic of EU energy governance at an opportune moment. At European level, the agreement of new energy and climate targets for 2030 and the development of the EU Energy Union agenda provide an important opportunity for improving the robustness and resilience of energy governance. The shape of the future energy governance system is under active discussion, with proposals expected to be tabled by late 2016.

In this context, there are two important priorities for reform of EU energy and climate governance in the near term:

- Increase consistency and policy coherence, between member states, between energy sectors (including heat and transport as well electricity and gas), between policy areas, and between levels of governance (including local and regional as well as member state and EU).
- Ensuring an ‘orderly transition’ as Europe decarbonizes its energy system: avoiding stranded assets; providing predictability for investors; increasing reliability of outcomes and maximizing the value delivered from consumer or taxpayer spending.

The remarks below should be considered with these priorities in mind.

### **Case Study One (national energy security): Capacity Mechanisms**

*Capacity mechanisms are being introduced by some Member States in order to assure national security of supply.*

1. *How might the development of some form of governance system mitigate any impact of separate national capacity mechanisms on the EU’s energy policy?*
2. *How far can co-ordination of such mechanisms go before it becomes politically unacceptable?*
3. *How has this tension between EU and national objectives been handled thus far?*

As EU energy markets continue to integrate, they are becoming increasingly interdependent. This is the result of clear and consistent political decisions from member states to pursue an integrated internal energy market, and should not be seen as an external imposition). This integration offers significant and well-documented benefits, including potential EU-wide cost savings of €40-70 billion per year by 2030.<sup>32</sup> It also means, however, that it becomes increasingly important for any market interventions to be done in a coordinated and predictable fashion, or they will be liable to deliver perverse results.

National capacity mechanisms that are introduced without coordination with neighbouring states are problematic in an integrated system, for at least three reasons:

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<sup>32</sup> Booz & Co. Benefits of an integrated European Energy Market.  
[https://ec.europa.eu/energy/sites/ener/files/documents/20130902\\_energy\\_integration\\_benefits.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/20130902_energy_integration_benefits.pdf)



- First, capacity adequacy calculated nationally rather than at regional level will systematically overestimate the resources required for safe operation of the system, as it discounts available capacity in neighbouring countries.<sup>33</sup> This leads to wasteful and uneconomic over-procurement of resources.
- Second, in an interconnected system, it does not make sense to try to maintain a higher security standard in one jurisdiction than in its neighbours. This produces perverse signals for the location of new generation, and effectively means that consumers in countries with capacity mechanisms are effectively cross-subsidising the energy security of consumers in countries without such mechanisms.
- Third, uncoordinated or poorly-designed capacity mechanisms are market distorting and risk undermining the business case for demand-side resources and for interconnection. This, in turn, risks pushing up the overall costs of decarbonisation across the EU.

The issue of political acceptability cannot be disconnected from this picture of policy incoherence. It should be politically unacceptable for consumers to be liable for the costs of redundant resources and market distortions as a result of the unwillingness or inability of national governments to cooperate on security of supply.

The European Commission has previously sought to address this problem through producing non-binding guidance by DG ENER, developing state aid guidelines on capacity mechanisms, and carrying out a sector inquiry into capacity mechanisms in 11 European countries. The European Commission is also currently consulting on a Market Design Initiative with a view to introduce appropriate legislation in late 2016.

The Market Design Initiative is an important opportunity to address the current incoherence between national capacity market regimes and the broader internal energy market. It should:

- As a minimum, require a common methodology for calculating capacity adequacy
- Preferably, conduct capacity adequacy assessments on a regional basis (e.g. via ENTSO-E), and require that the regional assessment forms the basis for any national capacity mechanism
- Prioritise development of demand side and interconnection resources above new or existing thermal power plant
- Explicitly rule out support for coal generation, as the continued presence of ageing and often amortised coal generation on the system is a key blocker to effective decarbonisation and a major barrier to attracting new investment into new lower carbon alternatives.

### **Case Study Two (national energy mix): Renewable energy targets**

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<sup>33</sup> The Pentalateral Forum (Austria, Belgium, France, Germany, Luxembourg, the Netherlands, Switzerland) has developed a methodology for regional capacity adequacy assessment. To date, however, the UK has not been included. <http://www.tennet.eu/nl/nl/nieuws/article/first-regional-generation-adequacy-assessment-report-published.html>.

The October 2014 European Council agreed that the EU should cut its greenhouse gas emissions by at least 40% by 2030 compared to 1990 and that this should be delivered through a range of measures including renewable energy: “An EU target of at least 27% is set for the share of renewable energy consumed in the EU in 2030. This target will be binding at EU level.” This contrasts to the 20% renewable target by 2020 which has binding national targets for each Member State.

1. How could a governance mechanism assist the EU to deliver its stated policy, including not only the 27% renewables target but the overarching 40% emissions reduction target which relies in part on the renewables target?
2. How robust could a governance mechanism be without compromising Member State responsibility for their national energy mix?

EU governments have agreed RES targets for both 2020 and 2030. These increase the credibility and confidence that Europe will meet its climate change goals, by providing a signal for technology developers on the scale of future market opportunities, increasing predictability for investors and providing a basis for investment in enabling infrastructure (e.g. grids and interconnections).

Such targets are only effective if there is a credible expectation that they will be delivered. The EU has an unfortunate track record of setting targets that go unmet because delivery mechanisms have not been specified - most recently with the Europe 2020 Lisbon Agenda.<sup>34</sup>

The 2020 renewables target has a clear delivery mechanism: it is legally binding on member states, and countries risk fines if they do not deliver against the target. After pressure from the UK and other member states, the October 2014 European Council agreed that the 2030 EU renewables target should be ‘EU-binding’ rather than nationally-binding – a hitherto unknown concept.

The UK will need to deploy considerable volumes of renewable energy if it is to meet its own domestic obligations under the Climate Change Act – particularly as nuclear power and CCS have proven slower to deploy than previously assumed. It is unlikely that the UK’s proportion of a 27% EU-wide RES target would be more than it would need to implement domestically in any case. The UK national interest has little to gain by stripping the ‘EU-binding’ renewables target of all content: instead the UK should focus on how to use the target and associated governance arrangements to support the UK’s own decarbonisation goals, and to create a level playing field in Europe.

To be credible and effective, the governance arrangements on the 2030 EU-binding renewables target should have at least two components.

- First, they should be used to guide EU decision-making across energy and climate policy. The 2030 RES, energy efficiency, greenhouse gas and interconnection targets should be built in to grid infrastructure planning scenarios and evaluation of Projects of Common Interest.<sup>35</sup> The targets should be used to prioritise innovation funding

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<sup>34</sup> EPSC (2015) Europe 2020: From Indicators and Targets to Performance and Delivery. [http://ec.europa.eu/epsc/publications/notes/sn6\\_en.htm](http://ec.europa.eu/epsc/publications/notes/sn6_en.htm)

<sup>35</sup> This is not currently the case, particularly in the gas sector where ENTSO-G projections for future gas demand are not in line with EU RES, EE or GHG targets. See E3G (2014) Energy Security and the Connecting Europe Facility <http://www.e3g.org/news/media-room/energy-security-and-the-connecting-europe-facility01>

(e.g. in Horizon 2020). They should also be incorporated into state aid guidelines to avoid undue constraints on renewables deployment. In some cases, it may be appropriate to introduce conditionalities on EU energy funding (including the Connecting Europe Facility, structural funds, the NER400 and the modernization fund) to avoid support for fossil infrastructure if renewables and energy efficiency deployment is not on track.

- Secondly, arrangements must be developed for meeting the EU binding target if there is a shortfall from the national energy plans. There are two options for this:
  - Indicative national shares could be identified, with a commitment to increase national deployment where there is an EU shortfall in meeting the 2030 target.
  - An EU-level renewables support mechanism could be established to bring forward major innovative or cross-border renewables projects (e.g. offshore wind and marine connected to a meshed offshore grid; large-scale CSP or PV; advanced biogas, etc) where there is a shortfall in achieving 27% renewables at EU level.

It is important for the sake of predictability and good governance for the approach to be specified in advance and established in a revised RES directive, rather than waiting for a shortfall to occur.

### **Drawing the case studies together: Looking forward**

- *What are the implications of a strengthened EU approach to energy governance? What are the implications of not making swift progress towards a new – and clear – governance system?*
- *If National Energy and Climate Plans were to be the basis for a strengthened governance, who should be responsible for assessment, review and enforcement? How can transparency of that process be assured?*
- *What role should regional co-operation play in any new governance system?*
- *How can regional co-operation help to overcome the potential tensions between national and EU policy objectives?*
- *Should a new governance framework be enshrined in legislation?*

### *Overview*

Delivering the significant sums of investment needed to renew Europe's energy system will require transparent, stable and predictable regulatory regimes, including clarity on how EU-level targets will be met. Erratic regulatory regimes and weak governance raise the risk profile for investments and as a result push up financing costs and energy costs for consumers. This is not a problem that can be resolved within national boundaries alone: the interconnected nature of the European energy system means that states are affected by the decisions of its neighbours. In this context, it is in the interest of all member states have a

stable and workable governance regime in place that enables predictability of outcomes. This requires a governance system underpinned by a firm legal basis.

### *National Energy and Climate Plans*

A strengthened EU approach to energy governance needs to be focused on collectively addressing and responding to the risks that Europe's energy systems face. EU-level energy security assessments are undertaken for a limited range of potential shocks (e.g. stress-tests for adequacy of gas storage). However no one is currently in charge of monitoring systemic risks. This has worrying parallels to economic crisis, where individually-rational decisions by different actors made the system as a whole collectively vulnerable. The new governance system needs to be able to ensure EU energy and climate objectives are met even in the face of unexpected shocks. As a result we need a system for stress-testing national and European energy plans, as well as a clear view on both the rights and responsibilities required from participants in Europe's Energy Union.

In this context, the proposed National Energy and Climate Plans offer the potential to improve the consistency of energy policy across borders and to improve the Europe's capacity to identify and respond to energy system risks. The utility of the National Plans, however, depends on how they are developed and used. A collection of 28 national plans developed in isolation and with no feedback loops would make little difference. Instead, it is important that collective assessment is made of the national plans, and the outcomes of this assessment are used to ensure more robust decision-making at both national and European level.

This function could most usefully be fulfilled by the creation of an independent Climate and Energy Observatory tasked with supporting member state climate and energy policy development rather than transferring further powers to the European Commission. A Climate and Energy Observatory has the potential to possess the capability to understand how market and regulatory risk management processes can work effectively together to ensure future policy delivery in addition to understanding the underlying systemic risk landscape.

The Observatory would, therefore, be able to work with Member State governments to help ensure that policy objectives are being delivered effectively and not exposed to poorly managed risks. It would be tasked with analyzing the National Energy and Climate Plans and proposing how policy could be delivered more cost-effectively. Unless policy actions are actually harming other Member States, the final decision on policy will remain with Member State governments. However, the Observatory process will ensure a transparent public debate over decisions to intervene in the market and how the costs of interventions might be minimised.

Key functions of the Observatory would be to:

- Identify the impact on future policy delivery of Member State decisions on energy mix including where the actions in one Member State has material implications for the risk profile of its neighbours,
- Explore how future policy outcomes might be delivered more cost-effectively, for example, through resource sharing between Member States,

- Consider where infrastructure investments (including both network and efficiency investments) might be effective in improving policy delivery,
- Provide advice on research and development to fill key technology gaps.

This technical and policy analysis would not necessarily require new and separately funded resources. It could either operate as a ‘virtual’ body using expert resources and analysis provided by Member States and the Commission or it could ‘piggy-back’ an existing independent organisation such as the European Environment Agency. However, the independent nature of this body would be critical since this is necessary to build broad consensus, both within the policy-making community and amongst stakeholders, on the nature of the energy landscape through objective and evidence-based analysis. If successful, it has the potential to dramatically reduce the chilling effect on investment caused by uncertainty about the future which threatens the ability to respond to security concerns and challenges Europe’s growth prospects.

### *Regional cooperation*

Regional cooperation provides the opportunity to access many of the gains of an integrated energy market while continuing to be able to adapt to national specificities. Agreement between a smaller number of member states may also be easier to achieve than at the level of the EU-28.

In some cases, such approaches may sidestep subsidiarity concerns. However they will never avoid such questions entirely, particularly if regional level initiatives are endowed with powers previously exercised by member states individually.

There are currently a large number of regional initiatives active in the EU, ranging from longstanding regional market integration platforms such as Nordel and Mibel to more ad-hoc initiatives such as the North Seas Countries Offshore Grid Initiative, the Baltic Energy Market Integration Plan, and market coupling groups such as the Pentilateral Forum and the 5 Market Coupling initiative. The myriad regional cooperation initiatives in the EU have different objectives, overlapping geographies and a decidedly mixed track record of success.<sup>36</sup>

Many regional cooperation initiatives start with ambitious political objectives, but lack credible means for delivery on their initial ambitions. They often suffer from a lack of capacity and resources, an uncertain institutional basis and an inability to translate their conclusions back into national policies. This limits their effectiveness.

To fully capitalise on the potential offered by regional cooperation, a different approach is needed. Institutional structures for Energy Union governance should be established on the presumption that Member States wish to share resources. It is important, however, that this structure still allows Member States the freedom to deliver solutions on a purely national basis if desired. The structure should also avoid those aspects of policy delivery that have little to gain through pan-EU co-ordination and these can be left to Member States to design as appropriate.

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<sup>36</sup> See Ecologic (2015) Regional cooperation in the context of the new 2030 energy governance <http://www.ecologic.eu/sites/files/publication/2015/regional-cooperation-energy-2030.pdf>; and ECF et al (2013) From Roadmaps to Reality [http://www.roadmap2050.eu/attachments/files/Fromroadmapstoreality\(web\).pdf](http://www.roadmap2050.eu/attachments/files/Fromroadmapstoreality(web).pdf)

Those aspects of the wholesale electricity market that have the potential to deliver particular cost savings include renewable generation procurement (e.g. FiT/premium allocation), capacity and other system services procurement to deliver resource adequacy and system balancing, network planning/system architect, market operation and market surveillance. These functions align closely with those undertaken by regional independent system operators (ISOs) which are common in other international power markets. Establishing such regional delivery bodies within the IEM as part of Energy Union governance would have significant advantages, and this should be investigated as a matter of urgency.

As a final comment for the Committee to consider, it is important recognise that governance is not a zero-sum game between member states and the Commission. There are many more players with a direct stake in the Energy Union, from individual citizens to national parliaments. In particular, cities and regions will be critical to ensuring the Energy Union actually works in practice. They are active actors in the low carbon transition, with many cities being even more ambitious than their national governments. However, they face a number of structural barriers that need to be addressed: access to finance, lack of capacity or an unclear legal basis to undertake the necessary changes. The governance debate should open the space to rethink the role of local actors within the low-carbon transition and give them the means matching their ambitions. The Energy Union governance proposals must be clear about what cities and regions are being asked to do, and what cities and their citizens can expect from both member states and European institutions.

5 October 2015

## **Ecologic Institute—Written Evidence**

### *Summary*

The European Council's Conclusions of October 2014 on the EU 2030 Energy and Climate Framework and the Council's subsequent adoption of the Commission's Energy Union strategy signals an important renewal of political commitment to the European energy transition and long-term decarbonisation. These documents define a number of important strategic objectives that are essential to making the transition towards a low-carbon, secure and integrated European energy system by 2050. However, turning the Energy Union into reality will require the EU not only to reaffirm and reset the policy framework but also to get the governance of these strategic objectives right. In the recent European policy debate, the word „governance“ has become synonymous with the Commission's proposal for more streamlined and integrated planning and reporting of the Member States contributions towards the Energy Union and the structural transition towards decarbonised energy systems. However, Energy Union governance must be understood more broadly as referring to the institutional, legal, procedural, market and financial arrangements put in place to allocate responsibility between Member States, the European Parliament, and the Commission to ensure the delivery of agreed Energy Union objectives, including the 2030 targets. Getting governance right requires both reform and continuity across this landscape, albeit with an enhanced role for appropriate national climate and energy planning and reporting as an important commitment, coordination and transparency tool.

Getting EU climate and energy governance right in the post-2020 period will require reform of existing arrangements because the challenges are different to the pre-2020 period. As the EU intensifies its efforts to decarbonise, the changes required will no longer be at the margins of national energy systems. They will require deeper, structural changes to national energy systems. This necessary implies a stronger role for Member State ownership and competency in terms of implementation. Thus, an approach that respects subsidiarity and allows Member States more say in determining the specific components of their national decarbonisation and energy strategies is essential to the longer term success of EU objectives.

At the same time, however, care must be taken that a more „bottom up“ approach to EU energy governance does not lead to ineffective EU governance in which Member States are no longer bound to make and honour their commitments to collective EU objectives. Moreover, there is a need to maintain valuable elements of pre-2020 EU climate energy governance acquis, which has served Europe well. This is true of key elements of the existing planning and reporting framework under different Directives and regulations, of the role of EU legislation in the areas of energy efficiency, renewable energy and energy security, of the role of the EU institutions in ensuring that Member States fulfil their obligations on core issues of common EU interest, and of regional fora. These elements of EU energy governance have been critical enablers of a reliable, investor-friendly, least-cost pathway to achieving the outcomes on which the Energy Union depends and care must be taken to maintain them, even as the overall governance framework evolves.

The challenge for the EU energy and climate governance system is therefore to find an appropriate balance between reform and continuity, on the one hand, and between subsidiarity and credible commitments and assurance of delivery by Member States, on the other. All Member States, including the UK, should have a strong interest in ensuring that

the governance system finds the right balance. This is because Member States will need to be confident about the delivery of EU goals beyond their borders in order to plan and coordinate effectively and give confidence to investors. This seems to be particularly true for the UK. The UK has set itself ambitious decarbonisation targets to 2050 and should therefore in principle be keen to ensure that its neighbouring Member States in the EU are also acting in kind. A divergence between the ambition and effectiveness of implementation of climate goals in the UK, on the one hand, and a significant number of its EU trading partners, on the other, would also seem to pose problems in terms of competitiveness, market integration, and investor certainty for UK firms.

To better understand these issues in January 2015 a group of independent think tanks launched an interdisciplinary research project on EU energy and climate governance. Three of the group's papers considered the options for reforming planning and reporting that could accommodate potentially competing policy drivers while keeping the EU on the pathway to achieving its 2030 and 2050 targets. These papers are:

- Umpfenbach, Katharina (2015): "Streamlining planning and reporting requirements in the EU Energy Union framework. An opportunity for building consistent and transparent strategies," Ecologic Institute, Berlin
- ClientEarth (2015), "Streamlining Climate and Energy Planning and Reporting: Understanding the options, risks and opportunities", ClientEarth, London
- Sartor, O, M. Colombier, T. Spencer (2015), "Designing planning and reporting for good governance of the EU's post-2020 climate and energy goals", IDDRI, Paris

While ClientEarth is preparing a separate submission of evidence, this submission reflects the findings of Ecologic Institute and IDDRI which are relevant for questions 2, 3, 4 and 6 of the Call for Evidence. Key recommendations that emerged from this work were the need for:

1. A more integrated, co-ordinated and dynamic framework of national planning that enables Europe to work collectively to complete the Internal Energy Market, scale up renewables deployment, make energy efficiency first a reality, and to achieve economy-wide decarbonisation and an energy secure and competitive Energy Union.
2. A planning and reporting regime that has a basis in law to ensure comparability and consistency and conforms to good governance principles of effectiveness, accountability, transparency, legitimacy, policy coherence and subsidiarity. Robust climate and energy plans underpinned by rigorous modelling are key for unlocking the investment to ensure reliable, least-cost delivery of the EU's 2030 targets.
3. The new planning and reporting regime must ensure that Member States make meaningful, credible and reliable commitments to „achieving outcomes“. The most credible means for ensuring this commitment is by the rule of law. In its absence, it is incumbent on Member States to propose effective alternatives.
4. A differentiated approach to the design and use of different parts of the new national climate and energy plans (see answer to question 4 below); with clear differentiation in levels of commitment and obligation by Member States and in EU competences to review and ensure delivery between the parts.



5. A long-term strategic approach to forward planning orientated towards full decarbonisation by 2050 as an essential element of making the move towards more „bottom up“ EU climate and energy governance more effective, by enhancing Member State ownership, facilitating coordination, and building coherence between national 2030 strategies and EU 2050 goals. It is important to note, however, that the long-term strategies would not be understood as a target-setting tool, but rather allow for information exchange and facilitate strategic planning in the period to 2030.
6. A more streamlined planning and reporting regime that intelligently reduces administrative burden would avoid overlaps and improve coherence between reporting on national strategies.
7. A planning and reporting regime that balances respect for national choices over the energy mix while reflecting the EU’s Treaty mandate and appropriate role to orient the European energy transition in core areas of common interest.
8. A more inclusive and participative planning regime for energy and climate policy.

## **Question 2: Renewable energy targets**

In the European discussion on the 2030 Climate and Energy Framework, the UK and other Member States have expressed a strong preference not to be obligated to fulfil legally binding national renewable energy targets after 2020. The EU has thus proposed a target for renewable energy that is only binding on the EU.

To date, the existence of binding national renewable energy targets has served several important functions in EU energy policy, including inter alia:

- Investor stability and confidence despite changes in government at national level. This has been important in particular to establishing and connecting both local and European value chains for deploying renewable energies more cost-effectively.
- It has helped to bring down the cost of renewable energies (and of the support schemes promoting them) by obliging Member States to develop investment conditions that are conducive to the economics of these new technologies.
- High deployment first in Europe and now globally has been essential to paving the way for affordable technology options being available for ambitious future decarbonisation pathways at least costs.
- Helped the EU will meet its 2020 non-ETS GHG emissions target of -10% vs. 2005 levels – a target which covers ~60% of gross EU GHG emissions (ex. LULUCF).<sup>37</sup>
- Provided a credible and concrete basis for regional fora in the domain of electricity markets to begin discussing and developing responses to market integration challenges.

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<sup>37</sup> European Environment Agency, October 2014, GHG Emissions Trends and Projections in Europe: Tracking progress towards Europe's climate and energy targets for 2020, EEA Report N°6/2014, Copenhagen.

A fundamental question for EU energy governance post-2020 is therefore what tools it will use to ensure that these outcomes continue to be achieved in the absence of nationally binding renewables targets. Despite the Market Stability Reserve reform of 2015, research suggests that the EU Emissions Trading System on its own will not provide sufficient incentives for investors to drive further deployment of renewables between 2020 and 2030.<sup>38</sup> In the non-ETS sectors, legally binding national GHG targets should help to incentivise Member States to develop low-carbon energy solutions in the transport and heating and cooling sectors, including renewable energy. However, in practice, the experience with the 2020 Effort Sharing Decision suggests that the combination of high-level GHG targets, on the one hand, and sector or technology specific targets and measures, on the other, has been a very effective combination.

In the absence of nationally binding targets, and in the context of a weak EU ETS, it is incumbent upon the EU's Member States to propose a credible alternative mechanism to furthering the deployment of renewables and other low-carbon energy sources. This is necessary to make sure that deployment is consistent with enabling the achievement of the EU's 2050 climate goals. It is by no means obvious that allowing Member States to determine their own 2030 contributions to deploying renewables independently of a guiding long term decarbonisation strategy, and without any effective obligation to deliver outcomes to 2030, will do this.

Thus, one option explored in IDDRI's paper is the combination of a pledging and monitoring system for 2030 strategies, including explicit pledges on the contribution of both renewables and low-carbon energy in terms of their contributions in both ETS and non-ETS sectors. Member States would be free to determine their own pledged level of renewables in line with their own national decarbonisation strategies. However, to ensure that the nationally determined pledges are consistent with creating the enabling conditions to achieve the EU's 2050 climate targets, the plans would also require Member States to develop coherent (but non-binding) decarbonisation strategies to 2050. These non-binding strategies would inform their pledges on 2030 renewables and low-carbon energy deployment. In addition, a continuation of the EU Renewable Energy Directive to ensure best practice integration practice and procedures in Member States and set minimum standards will also be important in the post-2020 period – not least to minimise fragmentation in the internal market for energy.

To conform to good governance principles and be credible for investors, the governance regime must be designed to enable the EU to reliably achieve its 2030 target with respect to renewables by requiring Member States to “deliver outcomes”. This means a governance regime that requires Member States to: (i) make clear their intended contributions to meeting EU 2030 target in a manner that allows for aggregation at EU-level, (ii) commit to a forward strategy to deliver national pledges and implement required measures at the sector-specific level and (iii) foresees a mechanism to incentivise additional deployment if the EU proves not to be on track towards its 2030 target.

### **Question 3: Implications of a strengthened EU approach to energy governance**

In the post-2020 period, EU energy governance will need to address several critical governance needs for the Energy Union project to succeed. Firstly, it will need to ensure

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<sup>38</sup> O. Sartor, M. Matthieu, P. Del Rio, V. Graichen, S. Healy (2015) Decarbonising the power sector: what role for the EU ETS and complementary policies post-2020? Climate Strategies, London.

that Member States meaningfully contribute to the goals of the Energy Union and that the 2030 climate and energy goals are achieved. This is essential to ensuring that the EU remains on track to achieve its 2050 decarbonisation objectives, that the EU fulfils its international climate commitments, that it fills remaining gaps in its energy security strategy, and that it establishes a concrete and practical basis of action for regional cooperation and coordination initiatives to complete the internal market.

Secondly, the governance system must create a solid basis for regional cooperation and EU coordination to work. It is increasingly evident that the EU's low-carbon transition cannot succeed without strong cooperation and coordination between Member States, and especially at regional level. This is particularly apparent in the areas of electricity and transport. To date regional cooperation initiatives have focused largely on reacting to market developments (e.g. due to higher intermittent renewable energy penetration). However for the energy transition to succeed, such cooperation will need to become increasingly forward looking and anticipate necessary changes to the energy system.<sup>39</sup> For this, a combination of transparent planning and information sharing of Member States strategies is a required, along with a coordinating role to be played by regional fora and EU institutions.

Thirdly, the EU needs to ensure coherence between 2050 decarbonisation scenarios and its actions in the short to medium term. The European energy system is built on lumpy investments in capital stock and this creates considerable inertia in terms of the overall capacity to decarbonise the energy system in short periods of time. 2030 will represent roughly the half-way point between the point when the 2020 Climate and Energy Package was first implemented and the 2050 objective of 80-95% decarbonisation. It is therefore essential that the right enabling conditions are created in the period 2020-2030 to unlock deeper decarbonisation objectives by 2050. This is because higher uncertainty on the political commitment translates into higher risks for investors and into higher costs of capital, thus increasing the transition's overall costs. To date, only a few Member States have begun to tackle this question via the development of concrete and sufficiently detailed long term strategic plans. The EU therefore needs to incentivise all Member States to engage in this process and to begin a dialogue at the EU level to aggregate the results of different Member States' visions into a common vision. This process is essential for ensuring Member State ownership of the decarbonisation goal, and for setting national, regional and EU policy agendas in the short and immediate term (e.g. for R&D, infrastructure build out, etc.).

Finally, to be credible and permit an investor-friendly transition, the EU's post 2020 planning and reporting must conform to the principles of good governance. The success of the 2020 acquis in driving delivery of the EU's 2020 targets and the EU's standing as a global climate leader rests in large part on the fact that the planning and reporting regime put in place to ensure those targets' delivery conformed to EU principles of good governance: effectiveness, accountability, transparency, legitimacy, policy coherence and subsidiarity. This requires that the post-2020 governance framework incorporates a number of standardised elements that must be addressed by all Member States, including, inter alia: binding templates for plans and reports detailing data requirements that allow for effective monitoring, progress comparison, projections, and EU-level aggregation; a credible mechanism for enabling the Commission to ensure that the sum of Member State effort is sufficient to enable the EU to meet its 2030 targets; a credible mechanism for ensuring national accountability for progress; transparent

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<sup>39</sup> Umpfenbach, K., Graf, A., Bausch, C. (2015): Regional cooperation in the context of the new 2030 energy governance. Berlin: Ecologic Institute.

access to relevant documentation and reporting data; regular status updates on Member State and Commission's actions; regular updates of plans; meaningful participation of stakeholders in the plan making processes; and a clear long-term perspective.

There are legitimate and important opportunities for streamlining and reducing different planning and reporting obligations under the 2020 acquis. However, there is also danger that this streamlining agenda will go too far and large amounts of vital information for ensuring transparent and effective governance of EU and national policies will be lost. A careful and appropriate balance must be struck (see also question 4).

#### **Question 4: National Energy and Climate Plans**

The arrangements for post-2020 national planning and reporting must facilitate better integration between objectives. Integration is needed between achieving GHG reduction objectives, scaling up renewable and low-carbon energies, significantly improving energy efficiency, on the one hand, and between these areas and national contributions to energy security and full implementation of the internal energy market, on the other hand.

National planning for completing the internal energy market (in particular enhancing interconnectivity and creating better functioning and more liquid markets for electricity and gas) and energy security should be embedded in a more strategic and long-term decarbonisation perspective. Meeting the EU's 2030 and Energy Union objectives will require Member States to make non-marginal and coordinated changes to their energy systems. It is therefore essential that post-2020 governance provide both a credible mechanism to ensure delivery of the EU's 2030 targets and a framework for ensuring a more integrated, strategic, dynamic and long-term process of national energy and climate planning that ensures that Member States work collaboratively to take account of regional and bilateral spillovers and synergies in how they approach the post-2020 stage of the energy transition.

To be workable in practice, post-2020 planning and reporting should be designed around a "modular" structure comprising different "chapters" or "tiers" of governance to reflect the reality that different elements of the energy transition should be governed differently. Credible pledges and monitoring of those elements of national strategies that are relevant to deliver core Energy Union objectives, including the 2030 targets, cannot be achieved by merging all of the current planning and reporting arrangements into just one single high-level energy and climate plan and one report.

The authors do agree that the existing regime includes areas of overlap and fragmentation and thus significant scope for streamlining. However, a single plan and report replacing all existing planning and reporting would imply a significant loss of detailed information. This would be inconsistent with the EU's stated commitment to transparent and participatory governance. Moreover, it would also deprive the European Commission of a crucial means to monitor how Member States implement mandatory measures contained in EU directives (e.g. on competition in the energy sector or simplification of licensing procedures for renewable energy plants) on national level. An EU with the power to make policy and pass laws but without the power to monitor their implementation or effectiveness is a recipe for bad governance.

On the other hand, if the single climate and energy plans were to include all the information that is currently provided by a set of separate documents, the co-ordination of such a wide-ranging process risks being impractical for national administrations. More importantly, such a

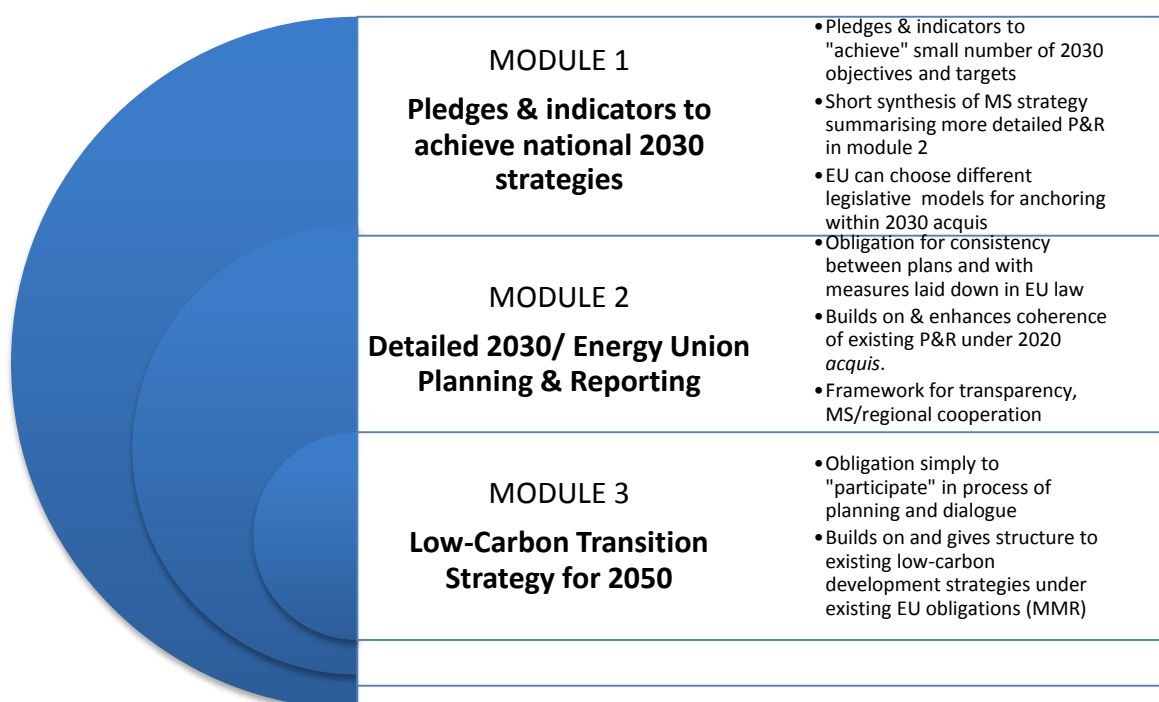
scenario could imply a level of EU oversight and interference into national policy implementation choices that would be inconsistent with the principle of subsidiarity and the rights of Member States to choose their energy mix. It is therefore necessary to introduce some differentiation between the chapters or component „modules“ of national plans and reports.

The analysis concluded that by adopting a calibrated “modular” structure for Energy Union planning and reporting, it will be possible to achieve both a streamlined and integrated governance regime as well as conformity with good governance principles. Such a modular structure would allow for high-level pledges towards EU targets and tracking of key indicators that are relevant to Member States achieving outcomes of strategies in core areas of the Energy Union on the one hand, and more detailed transparency and information-sharing that builds on existing planning and reporting requirements on the other hand.

The key features of the recommended modular structure are summarised below. It should be noted, however, that in the modular architectures proposed:

- a) The constituent tiers or modules of planning and reporting operate as a package of complementary documents;
- b) It is envisaged that all modules should be grounded in law. The studies identify different legislative options for achieving this;
- c) All modules within the recommended governance regime are designed to conform with good governance principles;
- d) Within each module, Member States are subject to different levels of obligation.

**Figure 1. Modules of new planning and reporting framework**



**Module 1:** This module of planning and reporting would comprise of a concise, limited and high-level set of targets, pledges and indicators that would together summarise the Member State’s strategy for implementing the EU’s 2030 targets and objectives under the Energy Union. Member States’ strategies would show quantitatively how the Member State intends to meet and contribute to nationally binding, EU binding and non-binding EU objectives and targets. By limiting the list of items on which Member States would be required to pledge or provide an indicative goal, this would help to ensure buy-in and commitment from all Member States to the core objectives of the Energy Union and the 2030 Framework.

This tier of governance would be supported by strong and regular (annual) review by the Commission and characterised by obligations to “achieve outcomes” to ensure that the EU is on track to implementing the overall 2030 strategy. However, there would be some differentiation between the level of obligation attached to different items contained in the high-level strategies – for instance, nationally binding GHG targets would of course be legally binding, pledges relating to EU-binding targets would be required to be sufficient in aggregate to ensure collective fulfilment at EU level, while non-binding indicators would allow more flexibility provided the Member State was on track with broad aims of its strategy in each dimension of the Energy Union. This short, high-level strategy document would also allow for effective and explicit integration and coordination of trade-offs and synergies between the core elements of the Energy Union; and facilitate a clear vision of what each Member State is contributing to the Energy Union.

**Module 2:** This planning and reporting module would provide additional and more detailed information about the specific assumptions, measures and implementation of Member State pledges set out in Module 1. In particular, it would allow the Commission to monitor how Member States implement the measures included in the revised Directives (e.g. priority access to the grid for RES, increasing competition in national energy markets). This information would be used to set agendas for regional cooperation and coordination, provide certainty for investors and transparency in the interests of good governance. This module should also be enshrined in law clarifying templates, reporting obligations and uses of the information. This information would in effect cover the essential information currently provided as part of planning and reporting obligations under related EU legislation (e.g. renewables and energy efficiency directives) to avoid overlap and ensure consistency. A key conclusion of the analysis by IDDRI and Ecologic Institute is that it would be impossible to include all elements of the current acquis into one detailed plan or report on a regular basis, given the scope of the information and the way in which it cuts across different government departments and independent agencies.

**Module 3:** This longer-term strategy development module would replace one of the existing obligations under the Monitoring Mechanism Regulation with a more concrete and practically useful template and process for developing national low-carbon strategies. By obliging all Member States to undertake such a process of reflection, it would provide a basis for creating coherence between national 2030 strategies and the EU’s 2050 decarbonisation goals. A further extension of this module is that Member States could be required to participate in the definition of a new EU2050 Roadmap to a low-carbon economy that would involve iterative rounds of plan submission and dialogue with the Commission and other Member States to identify the nationally acceptable conditions under which the EU could achieve its 2050 targets. To reduce the administrative burden, this module could initially be submitted separately and potentially at a later date than the planning element in Modules 1 and 2, with later iterations bringing the dates closer together. This module would be

characterised by light-touch obligations to simply participate in the plan-making and information-exchange process. The importance and potential structure of this module of governance is discussed at length in the paper by IDDR.

### **Question 6: The need for legislation**

Governance must be anchored in legislation. In the post-2020 period the revised Renewable Energy Directive, Energy Efficiency Directive, Effort-Sharing Decision and Emissions Trading System Directive, and revised legislation on security of supply and internal energy market integration should continue to perform the functions of articulating the EU's agreed targets for increasing use of renewable energy, reducing energy demand, reducing GHG emissions and improving gaps in the EU's security of energy supply. These tools have thus far proved essential for specifying the measures that must be taken at national level to ensure the necessary regulatory, investment and infrastructural conditions to deliver European outcomes of common interest. In the post-2020 period, Member States' flexibility to adapt their strategies to national circumstances and preferences will become increasingly relevant. However, this doesn't need not to be inconsistent with well-crafted EU legislation which sets minimum standards that are relevant to all Member States, promotes best practice implementation, and facilitates harmonisation and coordination to minimise costs.

The EU in general has a poor track record of achieving targets without obtaining concrete commitments from Member States with some form of legal backing for ensuring achievement of outcomes – even the European Semester process is backed by legislation. The EU's Member States must therefore be careful not to abandon essential safeguards of a robust European climate and energy governance system, even as it tries to integrate greater flexibility and a greater role for national competences and preferences into the post-2020 governance architecture.

Planning and reporting itself should also ideally be anchored in law. These governance tools are used to support Member States in formulating a harmonised, transparent and investable strategy for implementing measures and contributing to the delivery of EU targets. While the arrangements for post-2020 planning and reporting must evolve to facilitate a more integrated, streamlined and dynamic approach, these governance processes are critical enablers of an investor-friendly, least-cost energy transition, of transparency, effective policy revision and development, and regional cooperation. As such, it is essential they conform clearly to good governance principles and thus remain component of the revised 2030 acquis.

The EU can choose between a range of credible options for ensuring better integrated and more streamlined planning and reporting. Similarly, the EU can choose between a range of legislative options for credibly anchoring the revised arrangements within the 2030 acquis depending on the scale of integration and streamlining sought. Ensuring that an appropriate legal relationship is forged between the revised planning and reporting process and the revised 2030 acquis requires that they are both addressed together as part of the complete 2030 legislative package. Addressing these issues in isolation risks generating uncertainty as to the EU's commitment to credible governance of the energy transition. This could in turn quickly drain investor confidence in the post-2020 period and sharply increase the costs of achieving the EU's 2030 targets.

2 October 2015





## EDF Energy—Written Evidence

### Summary

It rightly remains a matter for national Governments to determine their national energy mix and to safeguard their security of supply and to take the necessary measures to achieve this.

Within this context, EDF Energy welcomes the development of the Energy Union, the 2030 Energy and Climate Policy package and the development of the internal energy market. These initiatives can support Member States in the cost-effective delivery of their own energy and climate policy objectives.

As an example, co-ordination of the development of capacity mechanisms can help to support the cost-effective delivery of security of supply. However, we recognise that there are challenges of developing the right approaches to cross-border participation in capacity markets and believe that it will take time to solve these issues.

The EU governance framework is an important element in this process and must strike a balance between the EU's overall objectives and the rights of Member States to manage their own energy policy in a way that is appropriate to their own specific circumstances. There are advantages to diversity across the EU and European policy will be more effective if it concentrates on the achievement of longer term policy objectives rather than prescribing detailed policy measures.

Within this framework, there is an important role for regional co-operation to enable progress to be made faster than would be possible on an EU-wide basis.

### About EDF Energy

EDF Energy is one of the UK's largest energy companies with activities throughout the energy chain. We provide 50% of the UK's low carbon generation. Our interests include nuclear, coal and gas-fired electricity generation, renewables, and energy supply to end users. We have over five million electricity and gas customer accounts in the UK, including both residential and business users.

### Question I

Capacity mechanisms are being introduced by some Member States in order to assure national security of supply.

- *How might the development of some form of governance system mitigate any impact of separate national capacity mechanisms on the EU's energy policy?*
- *How far can co-ordination of such mechanisms go before it becomes politically unacceptable?*
- *How has this tension between EU and national objectives been handled thus far?*

EDF Energy recognises that security of electricity supply remains a responsibility of national Governments rather than the European Union and believes that there are good reasons for Member States to introduce Capacity Mechanisms to assure the security of electricity

supply. We supported the introduction by the UK Government of a capacity market in Great Britain as part of the Electricity Market Reform (EMR) framework through the Energy Act 2013. We believe that, once it becomes operational in 2018, the capacity market will provide the right approach to ensure security of supply at the lowest cost to customers.

EDF Energy believes that the introduction of capacity markets is necessary because energy-only markets are unlikely to bring forward sufficient investment in capacity to ensure security of electricity supply. Capacity markets should be technology-neutral, market-wide and open to all providers of firm capacity including both new and existing assets; we are pleased that these principles were followed in the design of the Great Britain capacity market and were endorsed by the European Commission when it approved the scheme under state aid rules last year.

The critical issue for capacity markets from the perspective of EU energy policy is how to take into account the contribution to security of supply from imports through interconnectors, whether implicitly, by taking the contribution of interconnector flows into account in deciding on the capacity to be procured, or through explicit participation of either interconnectors or cross-border capacity in the capacity market. The first Great Britain capacity auction in December 2014 was based on the implicit approach but the December 2015 auction will allow the explicit participation of interconnectors in the auction. This was adopted as an interim solution until a common EU approach for the participation of cross-border capacity in capacity mechanisms is introduced.

Other EU countries developing capacity markets are considering very similar issues; for example, the French transmission operator, RTE, is currently consulting on behalf of the French Government about the approach to be taken to cross-border participation in the French capacity mechanism.

There would be benefit to the UK and other EU countries developing capacity markets in establishing a common framework for cross-border participation in capacity mechanisms. Such a framework should be consistent with the development of the European single market and should encourage an efficient level of investment in firm capacity to help each country to ensure security of supply at the lowest cost.

However, it is also evident that several steps are necessary to achieve such a common framework and we do not underestimate the challenge of achieving this. We do not believe it will be necessary or practical for all capacity mechanisms to adopt an identical design; however, there will be advantages in adopting broadly consistent approaches and the 2014 State Aid Guidelines on Energy and Environment have already established a common set of principles which capacity markets should meet. The next steps will be the development of common approaches to the assessment of generation adequacy and the cross-border contribution from interconnection and foreign capacity to security of supply. It will also be necessary to establish clear political agreement between connected Member States and technical agreement on co-operation between Transmission System Operators about how to deal with simultaneous stress events.

EDF Energy believes that progress can best be made through co-operation between Member States at a regional level; this will enhance national security of supply and will contribute to improved security of supply for the EU as a whole.

The European Commission is looking at these issues through a state aid sector enquiry into capacity mechanisms launched earlier this year and has also launched a consultation exercise on the development of the design of the internal electricity market. The state aid sector investigation is looking at a number of capacity mechanisms including that in the Irish Single Electricity Market, which includes Northern Ireland, but it excludes the Great Britain capacity market which has already been approved by the Commission under state aid rules.

Although there is the potential for tension between EU and national objectives, we do not believe that this has been a major concern so far.

## Question 2

The October 2014 European Council agreed that the EU should cut its greenhouse gas emissions by at least 40% by 2030 compared to 1990 and that this should be delivered through a range of measures including renewable energy: “An EU target of at least 27% is set for the share of renewable energy consumed in the EU in 2030. This target will be binding at EU level.” This contrasts to the 20% renewable target by 2020 which has binding national targets for each Member State.

- How could a governance mechanism assist the EU to deliver its stated policy, including not only the 27% renewables target but the overarching 40% emissions reduction target which relies in part on the renewables target?
- How robust could a governance mechanism be without compromising Member State responsibility for their national energy mix?

EDF Energy supports the EU 2030 framework including the establishment of an ambitious economy-wide greenhouse gas (GHG) reduction target of at least 40%. In support of this, we believe that a strong carbon price signal is essential and we welcome the measures being taken to reform the EU Emissions Trading System that will contribute to this.

The overarching target is the GHG reduction target and this will set binding national targets for each Member State. In this context, Member States should take a technology-neutral approach to decarbonisation, employing the most cost-effective measures for their own situation. The development of renewables and improvements in energy efficiency will be key measures that will contribute to the achievement of this target.

The Commission was correct not to make either the renewables target or the energy efficiency target binding at national levels. We would expect Member States to develop renewables and improve energy efficiency to the extent that they represent the most cost-effective means of achieving their GHG reduction target. However, to the extent that other decarbonisation measures are more cost-effective, we would expect Member States to pursue these instead. There is a risk that setting a number of binding targets on measures that are subsidiary to the overarching objective of reducing GHG emissions will lead to less efficient overall solutions.

It is important that governance framework supports Member States to pursue the right measures to deliver their GHG reduction targets without introducing unnecessary constraints on the way in which these are achieved.

## Question 3

What are the implications of a strengthened EU approach to energy governance? What are the implications of not making swift progress towards a new – and clear – governance system?

EDF Energy believes that it is more important that the governance framework should be clear and appropriate than it should be implemented swiftly. The proposed Energy Union envisages not only a greater focus on the European dimension of energy but also increased coordination of national energy policies. This will inevitably take some time to develop and will be an iterative process. The development of common market arrangements and of greater physical interconnection in Europe will facilitate increased cooperation. This is likely to lead to a convergence of policies.

However, we must also recognise the advantages arising from the diversity of Europe's energy mix which provides some protection against supply shocks. We therefore see risks in an overly prescriptive approach to EU governance. The governance framework must allow Member States flexibility in the way they deliver the 2030 targets through a technology-neutral, cost effective approach that recognises specific national issues.

#### **Question 4**

If National Energy and Climate Plans were to be the basis for a strengthened governance, who should be responsible for assessment, review and enforcement? How can transparency of that process be assured?

All Member States should have credible long-term plans for meeting both EU and national energy and climate objectives. These plans should be regularly reviewed and updated as necessary to ensure that they remain on course, while taking full account of the importance of policy stability for investors. Transparency is important to ensure effective implementation and to build confidence. It will be assisted by extensive consultation with stakeholders within and outside the energy sector. It will also be essential that there is regular dialogue with other Member States, particularly at regional level, and with the Commission.

While delivery of policy is a matter for Member States, the Commission will have a role in assessing national plans. The Commission should focus on the achievement of outcomes rather than the harmonisation of the means to achieve them. To support this, it should establish a limited number of key indicators to assess the effectiveness of policy at the European level. It will also be important to avoid unnecessary administrative burdens and overlapping reporting requirements under different elements of EU legislation.

#### **Question 5**

What role should regional co-operation play in any new governance system? How can regional co-operation help to overcome the potential tensions between national and EU policy objectives?

Regional co-operation has an important role, for example, in promoting increased security of supply and improved integration of markets; it will enable progress to be made more quickly than waiting for all Member States to be ready to move forward together. It will also help to ensure that the right approaches are taken that recognise geographical differences across the EU thus avoiding inappropriate “one size fits all” policies. For example, interconnection

will not deliver the same value for countries such as the UK and Ireland as it may for some countries in continental Europe.

**Question 6**

Should a new governance framework be enshrined in legislation?

EDF Energy believes that the first emphasis should be on improved dialogue and co-operation on energy policy. However, we recognise that there will be also be a need for some legislative provisions. We believe that it is important that these are not too prescriptive; they should allow adequate flexibility for Member States and should concentrate on the achievement of outcomes rather than prescribing specific policy instruments.

2 October 2015

## **Energy Networks Association (ENA)—Written Evidence**

### *ENA evidence*

The Third Energy Package was a milestone in the development of a functioning European energy market. Its objectives, which have largely been achieved, were to facilitate networks unbundling, to develop retail competition, to strengthen co-operation between the TSOs, and to establish the Agency for the Cooperation of Energy Regulators (ACER) to manage cross-border impacts.

We believe these objectives are well on the way to being met.

However, our concern is that EU energy policy is now venturing into parts of the energy system, and a level of detail in terms of guidance, that was not envisaged (certainly by GB stakeholders) when the Third Package was introduced.

In particular, from the networks viewpoint, both the Commission and the European regulators through ACER and the Council of European Energy Regulators (CEER) are focussing their attention on the role played by the Distribution System Operators (European expression DSOs), particularly the electricity Distribution Network Operators, who play a local and not cross-border role.

The potential level of prescriptive detail that could result, in terms of DSO governance and regulation, could have a detrimental impact on GB consumers.

For example, the Commission is looking to produce guidance, and potentially codify some arrangements, at EU level for DSOs. They are currently consulting on ideas for energy market design.

ENA is concerned that the Commission is looking to be quite prescriptive on the rules for the commercial operation of smart grids. This is a complex area, with the market for demand side response still developing. There is a threat the Commission will produce a network code or codes on flexibility and we need to be careful that the Commission's proposals do not stifle the market and over complicate issues. DSOs need to be active members in the new market. This means they must be able to sign up directly to DSR contracts as this provides a number of benefits such as avoiding expensive investment in grid reinforcement and quicker, more efficient connections to the network.

ENA is also concerned the Commission may adopt an EU fixed tariff model which will risk losing the incentive for customer to reduce their consumption at peak times which cans lower system costs and help reduce customer bills.

If any new codes are developed, DSOs, TSOs and other related stakeholders need to be engaged and part of the design and implementation of the codes from the onset. The codes also need to reflect the current state of networks across member states and provide flexibility on implementation at a national level.

It is important it is recognised that the role of DSO is different in each member state. For example, in the UK DSOs do not lead the smart meters roll out. Therefore, it must be recognised that a one size fits all approach for the role and governance rules of DSOs is not

## Energy Networks Association (ENA)—Written Evidence

appropriate. While there may be general principles developed for all DSOs to follow, the specific application of those principles will need to be undertaken at member state level.

2 October 2015

## **Energy and Utilities Alliance (EUA)—Written Evidence**

All our members are impacted by decisions made by the European Union as we represent the entire energy supply chain and have five organisational divisions – Utility Networks, the Heating and Hotwater Industry Council (HHIC), the Industrial & Commercial Energy Association (ICOM), the Hot Water Association (HWA) and the Manufacturers' Association of Radiators and Convectors (MARC).

Our energy mix and systems are intrinsically linked, either through interconnectors or supply and quality standards. Therefore governance already exists to manage these processes. Largely these systems are operating in a manner that does not negatively impact the UK's ability to govern its own energy policy.

The proposals for greater Energy Union do pose questions on what greater cross European cooperation will mean for domestic policy. Our position is that the UK should ensure it is a key partner to developing the Union to ensure it is created with aims and policies that meet those of the UK. An isolationist policy would not be desirable for the UK's energy security. One example would be the EU's target of 15% of energy being from renewable sources by 2020. This target is part of the wider aim of reducing our carbon emissions by 80% by 2050. The requirement that renewables are part of the mix means that it encourages technologies that may be more expensive and less effective just because they are renewable. This is often at the expense of other technologies that may reduce more carbon but are not defined as renewable. This could include more efficient gas appliances or nuclear energy.

There are multiple policies that affect our members and we would welcome the opportunity to discuss these with the Committee.

The key policies are:

- Gas quality index (WOBBE) – The Wobbe index affects burner behaviour and combustion and so is a key safety consideration in relation to appliances. The harmonised standard aims to support the free movement of gas within the EU by specifying uniform conditions. The EC have announced an intention to amend the Network Interoperability and Data Exchange Code in 2016 with possible implications for EU countries including the UK.
- Energy Labelling – All energy using products now have to comply with EU regulations on product performance and labelling. This is harmonised across the EU with all products being labelled consistently. This is most recognizable from the A to G scale found on products. The UK has been able to lobby effectively in the past to ensure that these standards and labels reflect the UK's current product mix. However there are concerns that the EU will change these through greater Energy Union in a way that may be beneficial for products used in German or French homes but do not reflect how UK homes are heated. This could affect future energy policy, costs to consumers and schemes aimed at reducing carbon.
- Harmonised product standards - Harmonised standards are developed by European standardisation bodies following a mandate from the EC/EFTA. They aim to assist compliance with EU directives and regulations by specifying a common approach to



## Energy and Utilities Alliance (EUA)—Written Evidence

some or all of the requirements. A harmonised standard will detail how a presumption of conformity is presumed if certain clauses are complied with.

2 October 2015

## Energy UK—Written Evidence

### General

Energy UK welcomes the opportunity to respond to the inquiry into European energy governance being undertaken by the House of Lords EU Energy & Environment Sub-Committee.

Europe is aiming to develop an “Energy Union”, which will involve a more “joined-up” approach to policy-making at European, regional and national level, as well as greater coordination between Member States. The EU governance framework is an important element in this process and should strike a balance between the EU’s overall objectives and the legitimate desire of Member States to manage their own energy policy. European policy will be more effective if it focusses on longer-term objectives and on outcomes rather than on micro-management of the energy sector.

Energy UK believes that the EU should aim to establish a comprehensive but flexible governance framework which covers both the 2030 objectives and the Energy Union agenda. The EU framework should focus on collective progress towards agreed objectives and should give Member States the flexibility to meet their energy policy goals in the most cost-effective way for national circumstances.

A balance should be maintained between energy policy objectives and there should be a strong emphasis on affordability and competitiveness to ensure that Europe does not fall behind other trading blocs. Energy UK would like to stress the importance of a single European market in energy, as this will promote greater interdependence and more collaboration between Member States, which will help bring about a convergence of policy. It follows that the single market should be at the heart of the governance framework.

### Specific Questions

*Capacity mechanisms are being introduced by some Member States in order to assure national security of supply.*

- *How might the development of some form of governance system mitigate any impact of separate national capacity mechanisms on the EU’s energy policy?*
- *How far can co-ordination of such mechanisms go before it becomes politically unacceptable?*
- *How has this tension between EU and national objectives been handled thus far?*

Electricity markets have been significantly affected by policy and regulatory developments in recent years, notably the increase in renewable capacity, the adoption of ambitious climate targets and the phasing-out of older fossil plant in response to EU environmental legislation. In these changed circumstances, Energy UK has doubts that an energy-only market alone will ensure sufficient investment to decarbonise the sector, while maintaining security of supply. We therefore believe that well-designed capacity markets can play an important role in incentivising investment and ensuring generation adequacy.

It is important that capacity markets are designed in such a way that any distortions to the European single market are minimised. In Energy UK's view, the key is to establish a common framework for cross-border participation so as to enable competition and encourage an efficient level of investment in firm capacity within any given market. A detailed reference model or full design harmonisation is not needed, as the current diversity of market conditions across Europe leads to different requirements. However, all capacity markets should adopt common principles – market based, technology-neutral with all firm capacity eligible, open to new and existing assets.

Before establishing a detailed framework for cross border participation, there needs to be agreement at a political level between interconnected Member States on the principle of shared security of supply. This is required to provide assurance that exports will not be curtailed when there are contracts in place for provision of capacity across borders. There should be a set of transparent rules around how simultaneous stress events are to be managed.

Energy UK does not believe that the tensions between European and national security of supply objectives should be overstated – security of supply at EU level depends on the reliability of the power system at national and regional level, and Member States should be encouraged to establish a robust national framework which avoids any possibility of “freeloading” on others.

The 2014 State Aid Guidelines on Energy and Environment have already established a common set of principles which capacity markets should meet. The governance arrangements should build on this framework and monitor the development of the single market, with particular focus on cross-border trade. As markets become more physically interconnected and national governments become more confident in relying on cross-border supplies, it would be logical to harmonise any elements of capacity market design which are proving an obstacle to trade.

*The October 2014 European Council agreed that the EU should cut its greenhouse gas emissions by at least 40% by 2030 compared to 1990 and that this should be delivered through a range of measures including renewable energy: “An EU target of at least 27% is set for the share of renewable energy consumed in the EU in 2030. This target will be binding at EU level.” This contrasts to the 20% renewable target by 2020 which has binding national targets for each Member State.*

- *How could a governance mechanism assist the EU to deliver its stated policy, including not only the 27% renewables target but the overarching 40% emissions reduction target which relies in part on the renewables target?*
- *How robust could a governance mechanism be without compromising Member State responsibility for their national energy mix?*

Energy UK supports the general EU framework agreed for 2030 and particularly welcomes the establishment of an ambitious economy-wide greenhouse gas (GHG) reduction target of at least 40% on 1990 levels. This target is a key element in providing clarity for investors and, if supported by the right policy instruments, should help to bring forward the major investment in low-carbon technologies which Europe urgently needs.

The 2030 framework is also welcome in seeking to address one of the weaknesses of the “20/20/20” targets agreed in 2008, the fact that the specific targets for renewables and energy efficiency tended to cut across the GHG target. EU ETS is a market mechanism aiming at cost efficiency, whereas the renewable and energy efficiency targets have to be met irrespective of the cost. The unintended consequence of multiple targets, taken together with reduced energy demand as a result of the recession, has been to undermine the carbon price and to prevent more cost-effective carbon abatement measures.

The GHG target for 2030, coupled with a strong carbon price, will provide a major incentive for investment in renewables and energy efficiency, as shown by the Commission’s analysis of the 2030 framework. Consequently, it is logical not to require binding national targets in these specific areas, particularly since the renewable resource and scope for energy efficiency improvement vary considerably across Europe. Instead, the governance framework should encourage Member States to take a technology-neutral approach to decarbonisation, employing the most cost-effective measures for their own situation.

Energy UK agrees that the development of renewables must continue into the 2020s and there will still be a need for a dedicated support framework, particularly for immature technologies that require assistance to achieve commercialisation. In recognition of the EU renewables and energy efficiency targets, Member States should implement a clear and stable policy framework which promotes investor confidence and ensures that the 2030 package is delivered cost-effectively. Member States should also cooperate in developing renewable projects, particularly where a trans-national dimension exists, e.g. offshore projects.

*What are the implications of a strengthened EU approach to energy governance? What are the implications of not making swift progress towards a new – and clear – governance system?*

As widely acknowledged, one of the weaknesses of EU energy policy has been uneven implementation of EU Directives, e.g. on the single market, decarbonisation etc. The governance system should focus on outcomes and effectiveness of implementation and should therefore help to tackle this problem.

Energy UK believes that it is more important that the governance framework should be carefully thought through, than that it should be “rushed in”. The proposed Energy Union envisages not only a greater focus on the European dimension of energy but also increased coordination of national energy policies. This will inevitably take some time to develop and will be an iterative process. The development of common market arrangements and of greater physical interconnection in Europe will help to facilitate increased cooperation, as it will promote more interdependence between Member States. This in turn is likely to lead to a convergence of policies.

Energy UK would caution against an overly prescriptive approach to EU governance. As mentioned above, we believe that Member States should have flexibility in the way they deliver the 2030 targets and should be encouraged to adopt a technology-neutral approach rather than setting a host of sectoral targets. While Energy UK supports more “joined-up” policies on the market and decarbonisation, it is also true that the diversity of Europe’s energy mix which has developed through different national policies can be seen as a strength and as a protection against supply shocks.

*If National Energy and Climate Plans were to be the basis for a strengthened governance, who should be responsible for assessment, review and enforcement? How can transparency of that process be assured?*

Given the need for policy clarity and stability, it is crucial that all Member States should put in place credible long-term plans for meeting both EU and national objectives. Regular dialogue with other Member States, particularly at regional level, and with the Commission will be important both for ensuring effective implementation of policies and building confidence. Better cross-border information should lead to more robust policy-making at both national and European level. Member States should be transparent about their policy drivers and objectives and should consult extensively with energy sector stakeholders.

To promote transparency and comparability, national plans should be designed according to an agreed standard format. The plans should set out the links between Member State policies and EU objectives, together with underlying energy projections. Unnecessary administrative burdens should be avoided and reporting under the various pieces of EU legislation should be rationalised to avoid overlaps.

National plans will need to be regularly reviewed to take account of energy market and geopolitical developments and progress with energy infrastructure. Member States should be able to undertake “course correction” where necessary, while bearing in mind the importance of predictability for investors.

While delivery of policy is a matter for Member States, the Commission has a role in assessing national plans. Energy UK believes that the Commission should establish a limited number of agreed key indicators to assess the effectiveness of policy at European level. The focus in reviewing the plans should be on the achievement of outcomes rather than harmonisation of the means to achieve them.

*What role should regional co-operation play in any new governance system? How can regional co-operation help to overcome the potential tensions between national and EU policy objectives?*

Regional cooperation can play a helpful role in promoting both more integrated markets and increased security of supply. Where the European power network is tightly meshed, it will be particularly important to ensure close coordination.

The governance framework should recognise that there are benefits in regional cooperation, as this can help like-minded Member States to press ahead, e.g. with market liberalisation, more quickly than all 28 Member States. Similarly, it should acknowledge that some parts of Europe, e.g. the UK, Ireland, Iberia and the Baltic States, are less interconnected than others and that a “one-size-fits-all” approach may not be warranted.

Energy UK notes that the UK Government and Regulator have been stepping up contacts with neighbouring markets, e.g. Ireland, France and the Netherlands and would expect this activity to broaden as further interconnection to the Continent comes on stream. Energy UK would welcome greater stakeholder involvement in this process.

*Should a new governance framework be enshrined in legislation?*

The Energy Union project envisages not only the further development of a European energy policy but also greater dialogue and cooperation between Member States on energy policy. It

## Energy UK—Written Evidence

is therefore important to avoid placing too much emphasis on new legislation, which is only one means of achieving more consistent policy approaches.

Given the need for more transparency and comparability of national energy and climate plans, it would be logical for the EU institutions to agree legislative provisions on governance. Energy UK stresses that the framework should not be over-prescriptive, should allow adequate Member State flexibility and should focus on outcomes rather than policy instruments.

5 October 2015

## Greenpeace—Written Evidence

**Would prices which reflect actual scarcity (in terms of time and location) be an important ingredient to the future market design? Would this also include the need for prices to reflect scarcity of available transmission capacity?**

Greenpeace sees the energy market of the future based on 100 per cent renewable electricity generation, in particular solar and wind. The 2015 Greenpeace Energy (R)evolution report<sup>40</sup> shows how a global transformation to 100 per cent renewable based energy systems is possible. Moreover, its detailed data analysis shows that a transition to 100 per cent renewables would create jobs and be cost competitive. In fact, the necessary investment is more than covered by savings in future fuel costs. In 2014, Greenpeace demonstrated in a similar report<sup>41</sup> how the EU's 28 member states can achieve close to 100 per cent renewable.

Less ambitious scenarios and the current EU goals for 2030 foresee that about half of electricity in the EU would come from renewable energy sources in 2030, with a high share of solar and wind. So regardless of which scenario is pursued, electricity production will become variable and will require a high degree of flexibility. This means Europe's electricity markets must utilise the full potential, demand response and storage. Moreover, dirty and inflexible old coal and nuclear power plants will have to be progressively retired.

The EU's current overcapacities in the electricity market, and planned life extension of the old energy sources are causing undue distortions of the market and undermines reaching the energy transition and environmental protection.

This can only be tackled if prices become more transparent, cost-reflective, if they reflect scarcity and surpluses and reward flexibility. Consequently, the new market design must improve market liquidity as well as ancillary services such as voltage support, which will in turn improve the economics of storage as well as renewable electricity generation, in particular PV. In addition, short-term markets are fundamental for ensuring variable renewable energy sources take up an increasingly large share of the energy mix. Therefore, the integration of intraday and balancing markets is a necessity, including speeding up the process of designing and through faster implementation of the network codes for day-ahead markets, intraday markets, and balancing markets, as is progress in creating European close-to-real time markets. It is important that price zone boundaries are determined by congestion and not national borders. The Target Model envisages this but member states are not implementing this swiftly enough.

On the production side, short term markets should reward those energy sources that are most flexible and dispatchable, in particular renewable electricity generation. On the demand side, the Commission and governments should actively pursue policies that would maximise the potential and benefits of demand-side management. The policies should ensure that member states provide advice to consumers on the offers, tariffs, and financial liabilities to become a prosumer and give access to supply markets, storage and other innovative tools.

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<sup>40</sup> Add full report link (available from September 21)

<sup>41</sup> Roadmap for Europe for a sustainable and independent energy system, 2014 : <http://www.greenpeace.org/eu-unit/Global/eu-unit/reports-briefings/2014/Roadmap%20report%2020140625.pdf>

Renewable electricity generation and in particular decentralised, community- and citizens-owned renewable electricity generation, as well as demand response and storage should be promoted, supported and not discriminated against. We therefore urge the Commission and member states to enshrine the right to self-produce, self-consume and sell to the grid in the new market design legislation. In particular, we propose that the issue of community- and citizens-owned renewable electricity generation should form part of the imminent Commission review of the Energy Consumers' Charter and be included in the new Renewables Directive, as further described in response to question 8. European state aid rules should continue to allow specific aid for renewables until the technologies become fully cost competitive.

**Which challenges and opportunities could arise from prices which reflect actual scarcity? How can the challenges be addressed? Could these prices make capacity mechanisms redundant?**

In order to boost renewable electricity generation, price signals must need to reflect actual scarcity and surpluses. The new electricity market design should ensure that the market values electricity at the true cost (incl. externalities) and enables those forms of electricity with the lowest cost to enter the market and be taken up by the grid first. Whilst, we recognise that it is possible that prices which reflect actual scarcity may be more variable and in some periods of the day may be higher, these price spikes are necessary to give the right market signals and therefore presents an opportunity. When prices more accurately reflect scarcity, the market environment will develop new market instruments based on demand and supply. The market will, for example, reward assets that are flexible and that can provide the necessary security of supply and protection from price spikes for consumers, whilst giving extra revenue to suppliers of flexibility. Moreover, in periods of low prices or negative prices, it will encourage storage and demand response. Under such market conditions, capacity remuneration mechanisms (CRMs) are not needed.

**Progress in aligning the fragmented balancing markets remains slow; should the EU try to accelerate the process, if need be through legal measures?**

Greenpeace sees an important role for the EU and regional cooperation in aligning the fragmented balancing markets, specifically to ensure that they transition from the current focus on conventional power generation, which often excluded or disadvantaged green technologies such as variable renewable power generation, storage and demand response, towards one that embraces these green technologies, thus improve the overall efficiency of the market.

Furthermore, we recognise the importance of increasing the geographical size of balancing markets to smoothen out variable output and demand variations. We therefore encourage the Commission to refocus its attention on cross-border renewable electricity projects under the trans-European energy networks Regulation (TEN-E) (EU347/2013), in particular in areas of low cross border capacity such as Spain-France which currently only has 1.4GW capacity.

**What can be done to provide for the smooth implementation of the agreed EU wide intraday platform?**

Resilient intraday markets are essential to the creation of EU-wide electricity market based on renewable electricity generation. They help optimise renewable electricity use and avoid



gluts of renewable electricity generation, which suppress power market prices unnecessarily. We therefore support the EU target model for electricity markets, which, once implemented, will be a significant contribution to the completion of the EU internal energy market and the achievement of other EU energy policy objectives, notably: the decarbonisation, the expansion of renewable electricity generation, security of supply and affordable prices. In fact, we encourage the Commission to speed up this process through the legislation on electricity market design.

Moreover, an integrated energy market must be based on a physically integrated energy system and physical interconnections must be further expanded.

**Are long-term contracts between generators and consumers required to provide investment certainty for new generation capacity? What barriers, if any, prevent such long-term hedging products from emerging? Is there any role for the public sector in enabling markets for long term contract?**

The Commission should promote EU policies that guarantee a stable investment environment for new renewable electricity generation capacity. However, Greenpeace is concerned that the EU's apparent reluctance to develop a transparent and reliable regulatory energy governance framework based on binding monitoring and reporting requirements for the EU's 2030 climate and energy targets is undermining investment stability. More importantly, if the EU is to achieve and exceed the 2030 renewable energy target, it needs binding or at least indicative national targets, backed by a legal obligation to take the necessary measures to meet the targets. At the moment, the CO<sub>2</sub> price reflected in the ETS is far too low. The Commission should work to strengthen the EU ETS and propose additional measures, such as an Emission Performance Standard (EPS).

Long-term contracts and power purchase agreements could help bring more investment certainty for both new small-scale, decentralised, and large-scale renewable generation capacity. The Commission should ensure that long-term contracts are available across interconnectors. A number of companies, including IKEA and Google, have already entered into long-term contracts for renewable electricity generation, in particular in the US. The public sector should be required to preferentially procure renewable energy, working towards 100 per cent renewable energy consumption. Long-term contracts should be limited to renewables to ensure that member states do not get locked into fossil fuels.

Renewables have experienced rapid growth rates due to well-designed support schemes in many member states, including Germany, Austria and Denmark. Their systems have allowed great participation of small-scale prosumers and communities. Support schemes have been crucial and Greenpeace continues to argue for the use of long-term support mechanisms including feed in tariffs, feed in premiums and net metering for renewable generation.

Greenpeace is concerned by tendering for renewable energy generation and therefore the Commission and member states should ensure that tendering frameworks are carefully designed to achieve cost-effective expansion of renewable electricity generation. In such a framework, tendering auctions should be held for large-scale established renewable electricity generation, but should exclude small-scale and community-based projects emerging technologies, due to the undue cost and administrative burden on these. For small scale and emerging renewable energy technology, an alternative support system should be used.

**To what extent do you think that the divergence of taxes and charges levied on electricity in different Member States creates distortions in terms of directing investments efficiently or hamper the free flow of energy?**

We strongly urge the Commission to step up efforts to phase out subsidies, tax exemptions and other advantages for fossil fuel producers, fossil fuel power stations and the nuclear industry. As a recent study by the IMF estimates<sup>42</sup> that the EU will subsidise petroleum, coal and gas with over US\$290bn in 2015. This support for old conventional power generation adds to the problem of overcapacity and is preventing the scale-up of variable renewable electricity generation. Moreover, it necessitates counter support schemes in favour of renewable electricity generation.

Decentralised energy generation, in particular community-based and small-scale renewables consumption and production should be exempt from paying grid charges, tariffs, duties and value added tax; not disadvantaged by EU or national policies. We further urge the Commission reject policies that curtail the expansion of decentralised energy through grid charges, taxes or fines.

**What needs to be done to allow investment in renewables to be increasingly driven by market signals?**

The new electricity market design legislation must provide for the transition towards an electricity market that will encourage investments into renewable electricity generation, demand response, storage and energy efficiency, including by boosting investor confidence in renewable electricity generation. For this to be achieved, the EU needs to create a strong Energy Union governance framework, fundamentally strengthen the Emissions Trading System (ETS) and complement it with other measures such as the Emissions Performance Standard, progressively retire the old fleet of dirty conventional power generation and finally encourage prosumers. The regulation must not sub-optimally design the system to favour the incumbent power suppliers.

The EU's Energy Union governance (incl. governance of the 2030 climate and energy targets) should be underpinned by a robust and ambitious legislative approach, building on existing EU legislation, including the renewable energy directive, energy efficiency directive, energy performance of buildings directive and effort-sharing decision. It must set binding or at least indicative national targets.

The Emissions Trading System (ETS) should also be strengthened and/or complemented. Extensive loopholes and derogations, combined with the effects of the economic crisis, have not delivered an appropriate carbon price and long-term investment signals. It would be very optimistic to expect, improvements, given the existing surplus of allowances and failings of the system. An Emissions Performance Standards (EPS) for example, could result in a more accurate market price for CO<sub>2</sub> by setting CO<sub>2</sub> limits per unit of electricity for fossil fuel power plants.

The oversupply of old baseload conventional power generation in the EU is leading to inflexibility and a dilution of market price signals. Moreover, the ETS and subsidies are prolonging the life-time of the most polluting plants and are distorting the market. As

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<sup>42</sup> <http://www.imf.org/external/pubs/ft/survey/so/2015/new070215a.htm>

mentioned above, price signals should instead reflect the full cost of electricity today. This in turn should result in the retirement of the most polluting power plants in Europe.

As noted above, prosumers should be supported and progressively build the core of the EU energy market. We stress the importance that community and small scale participation in the market should not compete with established large-scale renewables and therefore special support schemes are necessary.

**Which obstacles, if any, would you see to fully integrating renewable energy generators into the market, including into the balancing and intraday markets, as well as regarding dispatch based on the merit order?**

The market should facilitate and respond to variable renewable energy demand by improving short-term and balancing markets and ensuring that prices reflect actual scarcity. Moreover, the EU should focus on improving the flexibility of the electricity markets by utilising the full potential of renewables, demand response and storage. Please also take note of our comments on self-production and –consumption and the revision of the energy consumers’ charter and renewables directive above.

As mentioned in question 1 the EU and member states should enshrine the right to self-produce, self-consume and sell to the grid in the new market design legislation. This should be part of the review of the Energy Consumers’ Charter, which is up for review by the European Commission soon and be included in the Renewables Directive, which would oblige member states to set up a framework to regulate self-generation. Furthermore, the Commission needs to ensure that renewables and in particular decentralised small-scale renewable power generation, demand response and storage are not decimated against through additional taxes, administrative or grid fees and administrative hurdles. On the contrary, they should be actively encouraged at the European, national, regional and local level. The Commission should in particular ensure that these forms of technologies are fully included in the balancing and ancillary service markets, which would bring significant efficiency gains.

Renewable electricity generation is produced at almost zero marginal costs electricity from RES-e forms of electricity and should be first to be sold to and taken up by the grid. Yet, some inflexible power generators, such as coal and nuclear benefit from a ‘natural priority dispatch’ because of their inflexibility and costs associated in lowering their production. In fact, some countries, based on Article 25 of the Directive on common rules for the internal market in electricity (Directive 2009/72/EC), provide coal fired-power plants with a ‘legal’ priority dispatch. This is unacceptable.

**Should there be a more coordinated approach across Member States for renewable support schemes? What are the main barriers to regional support schemes and how could these barriers be removed (e.g. through legislation)?**

The Commission should encourage regional and European coordination focussing on decentralised energy production to facilitate decarbonisation and the achievement of the EU 2030 climate and energy targets. Moreover, given the different starting points of member states (i.e. market conditions, capital costs, administrative costs, etc.), national support schemes must be set up to ensure that the EU’s energy and climate targets are achieved and exceeded. The EU could and should assist the process by working towards greater harmonisation by means of revising relevant EU energy and climate legislation.

A recent study by the ‘Institute für Zukunfts Energie Systeme’ and Greenpeace Energy<sup>43</sup> identified many additional benefits of decentralised renewable electricity generation and citizens energy, including: local engagement; increased acceptance, direct or financial participation, diversification of actors and increased energy democracy; all driving innovation.

The study further describes that many local green energy projects would never have been initiated by traditional utilities and big investors, as they are commonly discouraged from investing because of the transaction costs of many small projects. Yet decentralised energy generation can have significant economic benefits for the local community and can help create acceptance, participation and involvement in the energy revolution.

Coordination points, so called “one-stop shops”, could help speed up development of small-scale renewables by coordinating different administrative and approval processes. They could offer advice to interested entities and citizens on technical matters, regulatory issues and eventually market access. Union funding mechanisms like the structural fund should be made available to support such bodies, and additional priority finance or grant schemes should be set up to support the introduction of efficiency and renewable electricity generation in homes most heavily impacted or most under risk to suffer energy poverty.

**Where do you see the main obstacles that should be tackled to kick-start demand-response (e.g. insufficient flexible prices, (regulatory) barriers for aggregators / customers, lack of access to smart home technologies, no obligation to offer the possibility for end customers to participate in the balancing market through a demand response scheme, etc.)?**

The EU must maximising the use of demand response in order to benefit fully from variable renewable sources. Flexibility of demand is crucial to ensuring market efficiency, improved reliability, reducing costs and enhancing environmental benefits (associated with the displacement of marginal fossil fuel plant and optimised use variable renewables). Greenpeace therefore supports national targets for demand response, as well as national plans to foster the shift from conceptual to real life uptake. Demand response should be supported through e.g. financial support for R&D and pilot projects at national and European level.

European law provides the right to choose and change electricity provider. Similarly, the Commission and member states should ensure that consumers have the option to benefit from managing their own demand. Small-scale consumers, for example, should have the option to choose from various time-of-use tariffs. Moreover, the right to choose and change providers should be expanded to include the right to choose the energy source of the purchased electricity (current energy labelling is only an insufficient first step). Demand response regulations and policies should obviously cater for all types of consumers, from households to big industrial energy consumers.

The Commission should promote conditions that allow demand response to participate in the energy markets and provide capacity, ancillary, balancing and security services; and create a space and clear business case for independent aggregators. For this to be achieved we need a systematic review of market rules and regulation to allow demand response to participate on equal footing to supply. As highlighted before, special considerations should be

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<sup>43</sup> Institute für Zukunfts Energie Systeme and Greenpeace Energy, Nutzeffete für Bürgerenergie: <http://www.greenpeace-energy.de/engagement/energiepolitik/buergerenergie.html>

given to the growing sector of self-consumers and self-producers, who should have access to schemes rewarding supply and demand management (and the possibility to be combined with storage).

**While electricity markets are coupled within the EU and linked to its neighbours, system operation is still carried out by national Transmission System Operators (TSOs). Regional Security Coordination Initiatives (“RSCIs”) such as CORESO or TSC have a purely advisory role today. Should the RSCIs be gradually strengthened also including decision making responsibilities when necessary? Is the current national responsibility for system security an obstacle to cross-border cooperation? Would a regional responsibility for system security be better suited to the realities of the integrated market?**

Cooperation between member states’ TSO is essential to ensure a greater integration of national markets towards a truly European electricity markets. Options to strengthen cooperation should include a stronger role of RSCIs, ENTSO-E and the ACER.

Particular attention should be given to those TSOs and DSOs located in the same balancing areas, including in relation to the planning and coordination of infrastructure investments and network maintenance.

**Fragmented national regulatory oversight seems to be inefficient for harmonised parts of the electricity system (e.g. market coupling). Would you see benefits in strengthening ACERs role?**

Greenpeace agrees that ACER should be given a stronger role and more legal responsibility, in particular for market coupling. Experience with the US Independent System Operators suggests that market oversight and infrastructure planning should be independent from national regulators and market players. Consequently, ACER should be made to report to and be overseen by a new independent European system operator. This should ensure that distributed energy generation, non-wires alternatives to capacity shortfalls, demand side management and emerging renewable energy technologies are fully taken into account by system operation and planning.

**Would you see benefits in strengthening the role of the ENTSOs? How could this best be achieved? What regulatory oversight is needed?**

ENTSO-E’s role should be strengthened to ensure that they are able to swiftly implement the third energy package and the network codes. Additionally, ENTSO-E mandate to improve cooperation between TSOs should be strengthened.

**How should governance rules for distributed system operators and access to metering data be adapted (data system operators and access to metering data be adapted (data handling and ensuring data privacy etc. in light of market and technological developments? Are additional provisions on management of and access by the relevant parties (end-customers, distribution system operators, transmission system operators, suppliers, third party service providers and regulators) to the metering data required?**

The data should be managed by a public institution that ensure that various private or public service providers only have access to the information that is essential for their particular

service. It should also ensure fair and non-discriminatory access to the data to avoid unfair competition or unethical use of the data. The management and use of the data should be guided by the same principles and logic that is behind the deployment of the meters, i.e. to maximise the economic benefits for consumers, to increase energy system security, foster energy savings and contribute to environmental protection. Moreover, most of the data should remain within the meter, giving consumers the right to determine the level of access to their data.

**Shall there be a European approach to distribution tariffs? If yes, what aspects should be covered; for example framework, tariff components (fixed, capacity vs. energy, timely or locational differentiation) and treatment of own generation?**

Given the differences in national electricity markets and conditions, a European approach to distribution tariffs may be premature. However, the Commission should facilitate exchange of experiences and best practices, and especially promote approaches that do not hinder the development of small-scale community and citizen renewable electricity generation and self-generation and self-consumption.

**As power exchanges are an integral part of market coupling – should governance rules for power exchanges be considered?**

We agree with the Commission that power exchanges should be governed by harmonised governance rules at EU level in order to assist the coupling of markets.

**Is there a need for a harmonised methodology to assess power system adequacy?**

Greenpeace is critical of CRMs and views these as an out-dated mechanism that distorts the market and is counter-productive in terms of achieving an integrated EU electricity market that can transition towards 100 per cent renewable energy. Indeed, in practice CRMs are often designed to prolong the life-time of out-dated and dirty conventional power plants and encourage base-load capacity that fails to value flexibility. They amount to state aid for fossil fuels.

For example, due to the decline in generation capacity, the UK security of supply was challenged, resulting in the need to assess the adequacy and design policy instruments to ensure sufficient generation capacity. The UK insufficiently supported demand response, storage and increased support of interconnections, which, alongside the expansion of renewable electricity generation and energy efficiency, could have largely solved the issue. In addition, we acknowledge that a policy instrument or suite of instruments were needed to ensure security of supply. However, the UK's capacity mechanism will support the most old-fashioned and polluting stations and does not value flexibility, and thus does not fulfil its purpose. Specifically:

- a) There is no link to carbon emissions, resulting in the life-time extension of old coal power stations. In fact, even dirtier fleets of small 'black start' diesel engines are being paid for their capacity availability
- b) Because it operates on pay as clear, it effectively pays power stations (including the old nuclear plants) for business as usual, i.e. for generating as much as they possibly can. In fact almost 30GW would keep generating regardless of what happens in the

capacity auction, yet would take whatever capacity payments as profits. This money should instead have supported the achievement of clean energy objectives.

- c) There was no reward for flexibility, which means that nuclear and coal power plants, which often take hours to scale-up, received money under the capacity mechanism without adding to flexibility or security of supply. The opportunity to plan for a renewable energy future was lost.
- d) Interconnectors & demand response were not supported.

This highlights, should CRMs be allowed under current state aid rules, we urge the Commission to design a harmonised methodology that assesses the adequacy of such mechanisms at national, regional and European level, while taking into account the internal and cross-border interconnections, levels of renewable electricity generation, storage and demand response. In addition, harmonised rules should also ensure that flexibility and efficiency standards are included as a norm in any CRM in the EU.

**What would be the appropriate geographic scope of a harmonised adequacy methodology and assessment (e.g. EU-wide, regional or national as well as neighbouring countries)?**

The adequacy methodology and assessment should be carried out at regional and European level. However, adequacy is not a sufficient requirement for allowing CRMs to be established in member states.

The methodology should be standardised at the EU level and take into account the contribution of internal and cross-border interconnections, levels of renewable electricity generation, storage infrastructure and possible demand response measures. Equally important are the establishment of minimum flexibility requirements for market participants taking part in CRMs, strict operational efficiency conditions such as compliance with stringent emissions performance standards and maximum running hours.

**Would an alignment of the currently different system adequacy standards across the EU be useful to build an efficient single market?**

Yes, we consider it important to harmonise the different system adequacy standards across the EU. This could be achieved through a revision of the Directive on security of electricity supply.

**Would there be a benefit in a common European framework for cross-border participation in capacity mechanisms? If yes, what should be the elements of such a framework? Would there be benefit in providing reference models for capacity mechanisms? If so, what should they look like?**

CRMs are clearly market intervention mechanisms and should be closely examined as part of the upcoming review of the state aid rules. The EU should only allow the use of CRMs in exceptional circumstances. Therefore, Greenpeace does not consider a European framework for cross-border participating in capacity mechanisms necessary. In fact, we consider the use of CRMs unnecessary in an energy-only market and would want to see priority given to market signals.

**Should the decision to introduce capacity mechanisms be based on a harmonised methodology to assess power system adequacy?**

Greenpeace rejects the notion that CRMs are necessary and considers that energy-only markets in which electricity is valued properly, prices reflect scarcity and flexibility will function more efficiently and more securely. However, to prevent unnecessary market distortion as a result of CRMs, we recommend that - if the Commission includes CRMs in its new electricity market design - it should take account of following:

- the implementation of CRM must be based on an EU wide, harmonised methodology;
- the European, regional and national system adequacy is taken into account;
- flexibility requirements are included;
- emission performance standards and maximum running hours are put in place;
- renewable electricity generation, storage and demand response should be included in CRMs;
- these requirements should be reviewed and tightened over time to reflect technological advances;
- CRMs should operate outside of the market, so that operators do not benefit from the market as well as the CRM and ensure that they have guaranteed capacity when needed.
- CRMs should be time limited and decisions reversible.

5 October 2015



Dr Ralitsa Hiteva, Dr. Tomas Maltby, Dr. Simona Davidescu—Written Evidence

**Dr Ralitsa Hiteva, Dr. Tomas Maltby, Dr. Simona Davidescu—  
Written Evidence**

[Evidence can be found under Dr. Simona Davidescu, Dr Ralitsa Hiteva, Dr. Tomas Maltby;—  
Written Evidence](#)

## **Institute for European Environment Policy (IEEP)—Written Evidence**

The following analysis is based on more detailed research completed by IEEP assessing the delivery of renewable energy in the EU and considering the nature of future EU action in this area. This includes work, to be published in Autumn 2015, for the RSPB and Birdlife International, entitled 'Delivering Environmentally Positive Renewable Delivering Environmentally Positive Renewable Energy - Messages for Policy Making up to 2030'.

### **Case Study One (national energy security): Capacity Mechanisms**

IEEP's evidence will focus primarily on the delivery of renewable energy; we have carried out less work on the impact of capacity mechanisms. Our general observation on the subject is that the current lack of clarity over the application of state aids and internal market obligations to capacity mechanisms, and the potential for significantly different designs for payments emerging in different Member State jurisdictions, creates a number of risks, particularly in the context of an increasingly interconnected and physically integrated EU energy market. It potentially makes it more complex for investors to gain a clear view of the broader market context, and it creates significant regulatory risk for investors (if the expectation grows that single market legislation or a more stringent approach to the application of state aids rules will be introduced, it will become more difficult for them to rely on the price signals Member States intend to create.

### **Case Study Two (national energy mix): Renewable energy targets**

Ensuring long-term availability of adequate energy to meet the needs of the economy is an important responsibility for national governments. However, national autonomy over energy choices needs to be considered in the context of effective delivery of collective objectives, particularly if widely divergent Member State approaches would be sub-optimal: in this case, objectives relating to climate mitigation and energy system decarbonisation are relevant. A technology neutral approach to decarbonisation, relying on incremental carbon price signals, is likely (i) not be consistent with a cost-effective long-run decarbonisation trajectory, (ii) to make it more difficult for individual Member States to address spatial planning challenges associated with energy investment, and (iii) to provide insufficient clarity to investors to facilitate early investment. In an increasingly inter-connected EU energy system (and interconnection itself is important to reducing long-run costs and integrating renewable energy sources more efficiently) Member States, including the UK, have a collective interest in delivery of early investment in renewable energy sources in order to (i) accelerate cost reductions in deployment and (ii) identify and address shared infrastructure needs, including grid infrastructure.

In our view, a strong governance mechanism is essential to ensure delivery of the 27% target at EU level, notwithstanding its relatively low level of ambition. In principle, that governance system should involve binding targets at Member State level; a target which is "binding at EU level" as suggested by the European Council, without enforceable requirements at Member State level, appears to have no meaning, and to be effectively an ambition rather than a binding target.

*Experience of the current Renewable Energy Directive*

The current Renewable Energy Directive (RED)<sup>44</sup> sets a binding target for each Member State to deliver a proportion of energy from renewables by 2020. The targets were determined by reference to historic performance in delivering renewable energy, and GDP per capita, thereby ensuring that an overall EU target of 20 per cent of gross final energy consumption from renewable sources could be met while ensuring that each Member State's target was relevant to their own national conditions. In the absence of such Member State targets, 'free riding' is likely to be a significant problem (a national government less motivated to take climate action may simply choose to rely on over-delivery by countries with more ambitious policies). Free riding creates problems in terms of the EU-wide cost of renewable energy delivery, and the consistency of the pattern of renewable energy investment with a long-run least-cost decarbonisation trajectory for the EU as a whole. Moreover, it means that Member States which wish to pursue more ambitious approaches<sup>45</sup> would be unable to ensure that doing so created an additional impact on climate mitigation, rather than simply an opportunity for free riders to do less.

Experience with the 2020 renewables target suggests that the binding nature of the targets, and the potential for enforcement action by the European Commission, has been valuable. The 2015 Progress Report from the Commission shows that 19 Member States are considered on track to meet their targets, but some need to take significant additional policy action.<sup>46</sup> The importance of enforcement action is highlighted in the case of Poland, where pressure the Commission was able to bring to bear was instrumental in ensuring the full transposition of the RED into national law.<sup>47</sup>

Under the RED, the National Renewable Energy Action Plans (NREAPs) submitted by the Member States form a strong basis for an ongoing system of monitoring and assessment of national progress.<sup>48</sup> Within the NREAPs Member States are required to set out a variety of information around support for renewable energy, policies under development and in place, and their anticipated use of different technologies to put themselves on a trajectory to meet their nationally binding renewable energy target under the RED. Subsequent progress reports<sup>49</sup> then reflect on Member State delivery against the NREAP.

The current legislative framework created a range of well-documented perverse incentives in relation to bioenergy. The sustainability criteria subsequently adopted for biofuels and bioliquids represented a positive step to attempt to control the potential adverse impacts of

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<sup>44</sup> Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources

<sup>45</sup> As allowed for by the European Council's October 2014 conclusions' reference to not "preventing Member States from setting their own more ambitious national target"

<sup>46</sup> Based on the 2015 Progress Reports for Member States 19 Member States, may deliver or potentially exceed their 2020 renewable energy targets with implemented and planned renewable energy policies. The Progress Report states that some Member States, including France, Luxembourg, Malta, the Netherlands and the United Kingdom, and to a lesser extent Belgium and Spain need to assess whether their policies and tools are sufficient and effective in meeting their renewable energy objectives. Achievement of the 2020 renewable energy targets is also not certain in the case of Hungary and Poland: it is only under optimistic assumptions related to the future development of energy demand and country-specific financing conditions that the 2020 renewable energy targets appear achievable – Renewable Energy Progress Report, COM(2015)293, 15.6.2015

<sup>47</sup> Detailed case information available upon request

<sup>48</sup> Details of all NREAPs are publically available at <https://ec.europa.eu/energy/en/topics/renewable-energy/national-action-plans>

<sup>49</sup> Member States are obliged to submit these every 2 years, with the Commission then assessing on this basis the effectiveness of national action and the likelihood of achieving the national target in 2020. To date reports were submitted in 2011, 2013 and 2015 and can be found at <http://ec.europa.eu/energy/node/70>

adopting biomass-based fuels. They were intended to address known environmental concerns and to enable responsible deployment. The success of the criteria has, however, been limited by their incomplete coverage of biomass use, and their failure to account for the full range of GHG emissions associated with biomass use for energy. As a result public and political support for the technologies has been undermined leading to a lack of clarity, and associated risk for the industry and investors. While the Inquiry's questions do not focus on bioenergy issues, it will be important for the EU 2030 regime, including the EU ETS, to improve significantly the way in which bioenergy is accounted for, and avoid a situation where Member States introduce a range of competing perverse incentives at national level.

### **The impact of governance mechanisms on Member State energy choices**

Arguably the current approach to binding renewable energy targets does little to 'compromise Member State responsibility for their national energy mix'. Within the bounds of what is deemed renewable Member States are able to act and support technologies freely with no imposition of requirements – beyond the need to achieve the desired goal and deliver an appropriate trajectory towards it. Importantly the formulation of the national targets does not inhibit flexibility or cooperation between Member States, as cooperation measures are specifically outlined to enable statistical transfer of renewable energy, joint projects or joint support schemes.<sup>50</sup> This means that alternative mechanisms and routes can be found for a Member State to deliver targets and national level actions.

There is also evidence to suggest that a governance approach that is strengthened and further clarified could improve Member State ability to deliver clean, cheap and secure energy solutions. For example, at present the NREAPs place little emphasis on where and how renewable energy will be delivered. Nor is there reference to how associated grid investments will be dealt with. Member States have also been criticised for approaching the NREAP process too much in isolation, failing to share information and maximise learning opportunities. It is difficult to facilitate Member State cooperation, unless the locations and spatial characteristics of anticipated and established development are set out. Renewable energy technologies, and the development of energy infrastructure more generally, are by their nature spatially site and location specific, as are many of their impacts. Better, more coordinated planning that properly takes account of environmental risk can increase certainty and reduce upfront administration costs for investors and developers. Market actors regularly cite the importance of clear rules, planning and permitting procedures as critical to facilitating development.<sup>51</sup>

### **Weaknesses in the approach proposed by the European Council**

The significant weakening of the governance framework suggested by the European Council's October 2014 conclusions creates a number of risks.

- The lack of national targets for energy efficiency, or clarity on what further support would be available for energy efficiency through EU level policy instruments (including product standards and vehicle emissions standards), and the uncertainty over even

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<sup>50</sup> It should, however, be noted that little use has been made of cooperation mechanisms to date.

<sup>51</sup> Based on experiences under initiatives such as BESTGRID <http://www.bestgrid.eu> and discussions with stakeholders around the future of EU and national targets for renewables energy and renewable transport fuels including comments made under the auspices of the Transport Energy Task Force in the UK.

the reliability of the indicative EU target, creates significant uncertainty over likely total future energy infrastructure requirements.

- This uncertainty in turn risks (a) a failure to bring forward investment in the deep decarbonisation necessary for longer-term emissions reductions beyond 2030, and (b) the potential for increased investment in currently cheaper, but more carbon intensive, energy sources, including gas, leading to infrastructure that is either stranded by more demanding targets in future, or which leads to incumbent lobbying against those targets and a failure to deliver long-term EU decarbonisation goals.
- The absence of nationally binding targets for renewable energy would be likely to lead to less ambitious, and less consistently pursued, approaches at Member State level, leading to:
  - A lack of certainty for investors, who would face greater policy risk in relation to Member State support mechanisms, than if those support mechanisms were backed by legally enforceable national targets;
  - The potential for those Member States less politically committed to decarbonisation objectives to free ride on more ambitious policies in other Member States, with the potential for reduced collective investment in support of energy decarbonisation objectives;

The lack of clarity for investment introduced by the significantly looser framework proposed by the European Council thus poses substantial risks both for longer term energy decarbonisation goals (and thus for climate mitigation objectives); and in the short- to medium- term for land use, biodiversity, and other environmental impacts from misdirected energy infrastructure investment.

### **Options for improvement**

**Member State targets** Targets that set some form of normative expectation for Member State performance – ideally binding, and ideally set on the basis of an objective process, rather than volunteering – are essential both to guide investment decisions and ensure delivery. This also enables those Member States which wish to adopt a more ambitious stance to do so, without simply creating greater scope for other Member States to free ride on their efforts. There will also be consequential benefits for emission reductions and an enhanced capacity to manage environmental impact. Moreover, clarity on the need for individual Member States to meet a specific share of renewable energy by 2030 would help to drive an improved level of spatial planning in national delivery. Without a clear indication of the required share of renewables for each Member State, which will give a good sense of the cumulative capacity needed, policymakers may place too much reliance on incremental price and policy signals which fail to provide long-term signals, rather than promote a clear vision of the overall investment required. Clear targets would both help to create greater investor certainty, and improve understanding of the cumulative environmental impacts of the investment required.

We recognise that this approach differs from the approach set out by the European Council, and that there may be significant resistance by a sizeable minority of Member States. In our view, the damage the European Council's approach would create both for investor certainty, for delivery of the EU's decarbonisation approach, and for the freedom for more ambitious

Member States to make real progress, are serious and dissuasive. Less constraining approaches, involving for example agreement on targets that are subject to mid-term review and adjustment, could be considered. At a minimum, an indicative share of renewables for each Member State is essential.

**National Action Plans** The requirement for Member States to develop a National Renewable Energy Action Plan has been beneficial in assisting more planned and transparent decision-making at national level, and in providing the Commission with some of the information necessary for it to gauge whether adequate progress is being made. Similar requirements should be maintained and strengthened (particularly if there are no binding national targets). The European Council's preference for bringing together diverse elements of energy policy planning into a single governance framework would create the right structure and could contribute to a better planned and more transparent transition. In particular, there is a wide range of spatial planning, land use and biodiversity impacts of renewables technologies and other energy investments required in the coming decades. A clearer spatial planning aspect to Member State energy plans would help to ensure that these impacts are addressed. Such plans would not only help to show how environmental considerations were being built into complex and geographically dispersed investment programmes but would help to demonstrate compliance with the Strategic Environmental Assessment Directive.

**Effective implementation of environmental legislation** While the prime role in planning for investment in renewables, selecting locations and addressing environmental impacts lies with the Member States, it is helpful to have a European framework with consistent core processes that guides good practice. The Strategic Environmental Assessment Directive and the Environmental Impact Assessment Directive remain of value and relevance to the planning of renewable energy investments. Experience to date indicates that they can help to avoid and minimise detrimental impacts (eg through early consideration of alternatives and the identification of mitigation measures) and can lead to worthwhile compensation for unavoidable residual impacts; although implementation varies considerably between Member States. Effective implementation of the Directives, and of the Birds and Habitats Directives, should be a priority in implementation of the 2030 targets.

**Planning for further mitigation post 2030** A weakness in both Commission and European Council policy statements on the 2030 targets is that they focus heavily on delivery of specific targets in the year 2030. The trajectory of renewables investment up to 2030 needs attention, through a system enabling tracking of progress and correction where necessary. As importantly, Member States need to plan their energy investment and system development in the light of emission reduction targets for 2050. A number of the pathways necessary for cost-effective mitigation beyond 2030 – in terms of renewables capacity, and the potential for electrification of sectors such as heat and transport, for example – may require preparatory investments now, which are unlikely to be incentivized by incremental carbon price and policy signals alone. The European Council's emphasis on delivery of targets in "a cost-effective manner", while it is fundamentally right (in principle, efficiency is consistent with sustainability; and high-cost approaches to delivery risk reducing societal and political support and ambition in the longer term), is undermined by this short-term approach. It creates risks of investment now in fossil fuel infrastructure (both generation and transmission) which will be stranded in the future by more demanding carbon targets; and thus of a wasted investment in that infrastructure, included avoidable associated environmental impacts.

**Providing for investor confidence, and reducing policy risk associated with renewables investment** - While the key mechanism for creating improved investor confidence in renewables projects, in our view, should be explicit and (ideally) binding renewables targets for Member States, other requirements could be included; and, indeed, would become more important in the absence of binding targets. Examples could include requiring Member States to set out how they will provide investors with improved certainty; and to set out clear commitments on the mechanisms they will adopt to ensure that investors in renewables capacities have some level of insurance or guarantee against policy risk (such as, for example, abrupt changes in support regimes, including the sort of changes this year which have created significant damage to energy investor confidence in the UK).

### **Implications of strengthened EU governance, and the implications of not making swift progress towards a new system**

The answers above in relation to case study 2 cover both (i) the risks of a significant weakening of governance arrangements and (ii) a number of potential improvements to governance, setting out in each case what we consider to be the implications. The risks of a delay in adoption of a new system are similar to those associated with adoption of a weak system: lack of clarity for investors, a lack of early action, and a failure to address the spatial planning dimension to renewables.

### **Responsibility for assessment, review, and enforcement of National Energy and Climate Plans**

A combination of review by the Commission, peer review by Member States, and a high degree of public scrutiny of plans should help to ensure that they are sufficiently robust. The question of enforcement depends on the binding nature of national obligations: in the absence of binding requirements there will be little to enforce, and little incentive for Member States to take seriously the requirement to produce national plans for EU scrutiny.

### **Role of regional cooperation**

The Commission's Energy Union communication<sup>52</sup> emphasises the importance of improved regional cooperation among Member States, particularly in view of the need for better interconnection planning. We share the Commission's belief in the importance of regional cooperation; in addition, improved regional cooperation could help to address many of the information challenges associated with the greater focus on land use implications of renewable energy capacity outlined above.

### **Should a new governance system be enshrined in legislation?**

Yes. Without legislative backing, the collective benefits expected to be delivered by EU policy on renewables will not materialize.

2 October 2015

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<sup>52</sup> "A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy", Brussels, 25.2.2015, (COM(2015) 80 final).

Dr. Tomas Maltby, Dr Ralitsa Hiteva, Dr. Simona Davidescu—Written Evidence

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## **National Grid—Written Evidence**

National Grid's job is to connect people to the energy they use, safely. In providing this vital service we are acutely aware of the importance of delivering value for money for consumers. A focus on driving down costs whilst continuing to deliver greater service reliability sits at the heart of our business model. National Grid owns and operates the high voltage electricity transmission system in England and Wales. In Great Britain, we do not own any electricity distribution assets neither do we own any Scottish or offshore electricity transmission assets. However, as System Operator (SO), we do operate the whole electricity transmission system.

National Grid also owns and operates the gas transmission system throughout Great Britain and through the low pressure gas distribution business, distributes gas in the heart of England to approximately eleven million offices, schools and homes. Under separate licences, National Grid also operates the liquefied natural gas importation facility at the Isle of Grain and the electricity interconnectors to France and Netherlands with its partners RTE and Tennet, respectively. In addition, National Grid owns and operates significant electricity and gas assets in the US, operating in the states of New England and New York.

National Grid fully supports the current efforts to build the EU's internal energy market, which will bring significant benefits for UK and EU consumers. We work together with our European partners on the development of network codes and long-term pan-European network development plans through ENTSO-E and ENTSO-G, and are also involved in several interconnectors (both existing and under development) connecting the UK and other European countries.

National Grid considers that the 2030 Energy and Climate Change framework is essential to give predictability to energy investors, and is beneficial from a UK and EU perspective. We also support the EU's lead push to develop more interconnection, and look forward to seeing leadership in this area continued.

When it comes to the EU energy governance, we believe it is important to strike the right balance with a mechanism that ensures a degree of coordination without being too prescriptive on Member States. This governance mechanism should be robust enough to ensure that 2030 objectives are actually met by the Member States, but at the same time leave them enough room to adapt to specific national situations, as advocated below.

As far as capacity mechanisms, we consider that the framework put in place through the EU State Aid Guidelines on Energy has proven useful in delivering a coherent approach. As further capacity mechanisms are developed by the EU, we welcome the efforts from the Commission to ensure that their impact on the internal energy market are minimised.

### **Case Study One (national energy security): Capacity Mechanisms**

Capacity mechanisms are being introduced by some Member States in order to assure national security of supply.

- How might the development of some form of governance system mitigate any impact of separate national capacity mechanisms on the EU's energy policy?

## National Grid—Written Evidence

- How far can co-ordination of such mechanisms go before it becomes politically unacceptable?
- How has this tension between EU and national objectives been handled thus far?

National Grid is of the view that whilst capacity markets may be needed in a number of Member States, they should be designed to mitigate any negative impact on the internal energy market.

A key measure to reach this objective is to ensure that non-domestic generation is able to partake in capacity mechanisms. A mechanism open to domestic and non-domestic generation, operating in harmony with the energy market and recognising the contribution of interconnectors to adequacy would ensure an acceptable security of supply without adversely impacting upon the internal energy market.

We consider that the existing State Aid Guidelines on Energy, which were adopted by the Commission in 2014, already provide a strong degree of EU coordination by ensuring that capacity markets abide by a list of clearly-defined criteria. The UK Capacity market was approved under these rules in July 2014.

As further capacity mechanisms are currently being set up across Europe, we view positively the current efforts from the European Commission to enhance coordination amongst Member States on the matter and ensure that we have a coherent design for these mechanisms across the EU.

### **Case Study Two (national energy mix): Renewable energy targets**

*The October 2014 European Council agreed that the EU should cut its greenhouse gas emissions by at least 40% by 2030 compared to 1990 and that this should be delivered through a range of measures including renewable energy: “An EU target of at least 27% is set for the share of renewable energy consumed in the EU in 2030. This target will be binding at EU level.” This contrasts to the 20% renewable target by 2020 which has binding national targets for each Member State.*

- *How could a governance mechanism assist the EU to deliver its stated policy, including not only the 27% renewables target but the overarching 40% emissions reduction target which relies in part on the renewables target?*
- *How robust could a governance mechanism be without compromising Member State responsibility for their national energy mix?*

National Grid considers that the 2030 Energy and Climate Change framework is essential to give predictability to energy investors.

The 2030 framework is also very positive from a UK perspective, as the UK has managed to get the other EU Member States to support ambitious greenhouse gas targets in line with its own strategy. This helps to avoid a situation where the UK is isolated in having made low-carbon commitments which would see its competitiveness reduced vis-à-vis other EU countries which do not commit to a low-carbon agenda.

Furthermore, we would expect the 2030 frameworks to significantly facilitate the development and evolution of low-carbon technologies across the EU, as was done with the 2020 framework – this will help making these technologies more affordable for consumers. The framework also rightly puts an emphasis on interconnection which plays a key role in achieving clean energy targets at an EU level.

We consider it important that a sufficiently-robust governance mechanism is put in place, to avoid a situation where some Member States could ‘free ride’ and disregard their climate objectives. It is however clear that such system should not interfere with the right of the EU Member States to choose their own energy mix. Furthermore, a governance mechanism is an opportunity to ensure a stronger degree of consistency between the Member States’ approach to energy policy.

It is therefore important to strike the right balance with a mechanism that ensures a degree of coordination without being too prescriptive on Member States.

### **Drawing the case studies together: Looking forward**

*What are the implications of a strengthened EU approach to energy governance? What are the implications of not making swift progress towards a new – and clear – governance system?*

The implication of a strengthened EU approach is a greater oversight from the Commission on domestic energy policies – but facing the risk of being too prescriptive on Member States and unable to cope with the existing variety of national situations. Having no clear governance system would leave room for manoeuvre to Member States but their responsibilities would likely be diluted – leading to a situation where Member States can ‘free ride’ and disregard their obligations.

A balanced approach would therefore consist of National Energy and Climate Plans drafted by Member States to ensure that these are consistent with the 2030 objectives. As suggested by the Commission, such plans could be updated on a regular basis and based on a number of key performance indicators, encompassing a number of issues like interconnection, market coupling, low-carbon energy, diversification of energy mix, etc. It would be beneficial to have such plans drafted under a common template.

*If National Energy and Climate Plans were to be the basis for a strengthened governance, who should be responsible for assessment, review and enforcement? How can transparency of that process be assured?*

It is clear that National Energy and Climate Plans should be designed and enforced by the EU Member States. The Commission could however, for instance, be tasked to check the consistency of the national plans and perform a critical review of these plans.

*What role should regional co-operation play in any new governance system? How can regional co-operation help to overcome the potential tensions between national and EU policy objectives?*

## National Grid—Written Evidence

We consider that regional cooperation has a strong role to play in supporting the achievement of the 2030 objectives. Joint regional initiatives will also ensure that the costs of pursuing this decarbonisation agenda are managed and shared more efficiently, for example by ensuring that renewable energy installations are developed in the most appropriate geographical regions rather than according to where the subsidies are most attractive.

Similarly, regional cooperation may also help delivering complex transmission projects in the future, for instance by facilitating discussions on the creation of a Northern Seas Grid.

*Should a new governance framework be enshrined in legislation?*

We do not have a strong view on this topic.

2 October 2015

## **Oil and Gas UK—Written Evidence**

### **EU and national 2030 targets**

We support the adoption of the EU's 40% GHG reduction target for 2030 and a fair and equitable effort-sharing decision to produce a binding UK GHG reduction target which is consistent with the UK's Fifth Carbon Budget (2028-32) to be decided in 2016.

Encouragingly, the EU appears to have learnt from the mistakes of the conflicting 20-20-20 targets and to have focused appropriately on a single target of GHG reduction in 2030. The agreement of a single binding target for each Member State and the reforms to the EU Emission Trading Scheme (ETS) will, in principle, permit emission reductions to be achieved at least overall cost. If decarbonisation policy is to retain public acceptance and maintain EU industrial competitiveness, it is essential that excessive costs are not imposed upon EU consumers.

We would not support the introduction of binding national targets after 2020 for renewables or for 'energy efficiency' (or 'energy saving'). Maintaining a high degree of national discretion and flexibility over the design of policy instruments is essential if the existing rights of Member States to determine their own energy mix and the development of their own indigenous resources are to be respected as EU-wide decarbonisation proceeds.

For the EU as a whole and for many individual Member States, the substitution of coal-fired generation by natural gas represents a large-scale, low-cost and assured route to an early reduction of CO<sub>2</sub> emissions. We believe this can best be achieved by well-designed reform of the EU ETS which recognises the risk of carbon leakage, policy flexibility provided by a single national GHG reduction target and, where necessary, restrictions of the construction of new coal-fired plant without CCS.

### **Need for 'light touch' EU governance system**

In October 2014, the European Council agreed that a 'reliable and transparent' governance system should be adopted to ensure the EU meets its policy 'goals'. In its Energy Union package published in February 2015, the European Commission proposed a more ambitious, and possibly intrusive, 'governance and monitoring process' to implement 'the agreed 2030 targets on renewables, energy efficiency, non-ETS and interconnections'. We support a 'light touch' EU governance system, as advocated by the UK government, to monitor the progress of Member States towards the 2030 objectives as set out in their national plans. We would not support more intrusive EU-level governance which had the effect of re-introducing de facto national renewables targets or excessively complex or duplicative administration. National discretion and responsibility for decarbonisation, without the possibility of intervention from EU 'governance', offers the best prospects for regulatory stability and sustaining investor confidence. It would be helpful in this respect if the EU governance system is agreed as soon as possible after the final agreement on national 2030 targets in order to avoid uncertainty.

### **Capacity markets should continue to reflect national priorities**

European electricity markets remain much more national in nature than gas markets with a much smaller share of output traded across national borders. As long as the internal market in electricity is far from completion, national capacity markets may be necessary where, as in

the UK, the power sector incorporates a growing share of intermittent renewables, provided that the capacity market is open to cross-border participation. Great Britain has already established a capacity market which meets the criteria for EU state aid approval; future auctions will include some improvements to avoid some unintended consequences and to lower the cost to consumers.

In its recent communication on electricity market design, due to be adopted in 2016, the European Commission has raised the prospect of a reference model for capacity remuneration mechanisms for application at regional level. We believe that the application of a prescriptive model to all regions or Member States would run the risk of undermining current GB arrangements and of introducing higher costs of ensuring capacity adequacy for UK consumers. We recognise that the EU has a role to play in ensuring that national instruments are consistent with the principles of the single market and do not frustrate market integration or distort competition. However, it is important that the EU does not adopt a highly prescriptive approach which imposes a sub-optimal market design and inefficient capacity market arrangements on most Member States.

### **Concluding remarks**

We support the process and outcome of the EU's 2030 energy and climate package and the broad thrust of the proposals for Energy Union. However, in finalising the legislation which will implement these measures, we believe that the EU should continue to respect the rights of Member States in existing Treaties. In our view, the EU should set the framework for co-ordinated action on energy and climate policy but that Member States should continue to exercise national discretion over the detailed implementation and should retain regulatory responsibilities. Preserving existing national discretion offers the strongest safeguard that the UK will be able to pursue least-cost decarbonisation and retain the widest possible political and public support.

2 October 2015

## **Renewable Energy Association (REA)—Written Evidence**

This response is based on a commitment to a progressive carbon price across the EU that not only supports low carbon technology deployment for electricity, but also across heating/cooling and transport.

### **How might the development of some form of governance system mitigate any impact of separate national capacity mechanisms on the EU's energy policy?**

Capacity markets are already in operation or proposed in a number of Member States and Commission figures suggest these could be in place in half of EU member states in the future. The impact of numerous separate Capacity Markets is not entirely clear at this point except that it might be expected to influence the 'market coupling' arrangements for wholesale prices, as supply levels will influence the price of power in one country and have knock-on impacts on other countries' prices, for example through cross-border interconnector flows.

The EU might be able to set European-wide requirements for Capacity Markets and then step back and enforce these. For example we believe any mechanism should address all elements of Europe's Energy Trilemma - ensuring security of supply, value for money and low carbon supplies. We believe many such mechanisms should be improved, for example the UK's by better supporting energy storage and Demand Side Response capacity, and more closely enshrining value for money considerations into new contracts. It is also not acceptable that absolutely no account is made of the carbon intensity of contracted capacity in such mechanisms.

### **How far can co-ordination of such mechanisms go before it becomes politically unacceptable?**

The majority of capacity mechanisms do not allow for renewable generation to apply for support. Therefore, leaving aside the above point, nationally-binding targets set at the EU-level generally do not apply, and there are arguably fewer reasons for an EU-wide coordination role except to comply with single market competition rules, which the Commission already oversee.

For example, each member state should be free to set their own Loss of Load Expectation and therefore net supply requirements, each year, as European involvement in this might be seen to be 'threatening our ability to keep the lights on'.

Should Capacity Mechanisms be reformed in the future to enable renewable forms of generation to apply for support, there would be a case for re-visiting this and seeking greater coordination, as the policy would relate to specific EU targets.

### **How has this tension between EU and national objectives been handled thus far?**

This has not been a significant concern as yet, as only certain countries operate Capacity Markets, however the European Commission opened competition investigations into a number of continental Capacity Mechanisms this year and this is how tensions appear to have been handled, as such, to date.

**How could a governance mechanism assist the EU to deliver its stated policy, including not only the 27% renewables target but the overarching 40% emissions reduction target which relies in part on the renewables target?**

**How robust could a governance mechanism be without compromising Member State responsibility for their national energy mix?**

We would have concerns that an EU wide target without specific national targets would be less likely to be met, as member states would not have a direct legally binding target they would have to meet. This would encourage 'free-riding' behaviour, where member states would lower their policy ambitions, hoping other member states' actions will be sufficient to meet the 2030 EU targets. And as there are no legally binding national targets to be held accountable to, this would remove the incentive for any member state to invest in low-carbon renewable energy infrastructure and transition to a low carbon economy.

To avoid this predicament, it would be necessary for the European Commission to ensure that the collective carbon mitigation plans meet the overall EU wide targets; and in case they do not, do so either through an iteration of pledges or separate financing mechanism to compensate for shortcomings.

To better guide the 'national pledges' procedure, the European Commission should provide a first benchmark on national targets. The European Commission will need to define 2030 indicative renewable energy benchmarks for each Member State which, aggregated, amount to at least 27%. Such benchmarks could be a reasonable compromise between a predetermined allocation formula and free pledges by member states in the absence of national targets. EU member states could then put pledges forward specifying a higher or a lower target than proposed in the benchmark, which would still respect member states' freedom to determine their energy mix and allow the necessary flexibility.

The allocation method used for the 2030 target could be similar to the 2020 allocation method, which factored in the economic performance of member states and therefore result in fairer systems incorporating stronger contributions for countries with a higher than average GDP per capita, rather than an equal split based on population. But other factors, such as related costs and the potential availability of renewable energy resources could also be taken into account.

Member States should set their post-2020 renewable energy pledges and trajectories in their national energy and climate plans considering the indicative benchmarks, and develop the enabling policy frameworks in line with the revised RES Directive.

The governance regime should provide for enhanced oversight by the European Commission allowing an effective coordination of Member States' efforts towards the target of at least 27%. This should enable the Commission to ensure any negative impact of changes to member states' regulatory framework on the 27% renewable target and 40% carbon reduction targets are countered by equivalent positive initiatives.

If Member States deviate from their trajectories and a gap between the aggregated national commitments and the overall 27% target is identified, the European Commission must be able to propose corrective measures which, unheeded, would trigger infringement procedures. If they are insufficient to fill the gap, the EC may need to use existing and new EU funds as trigger mechanisms to incentivise the collective RES engagement.



It is also vital that there is a transparent, well set out process for applying sanctions to Member States that miss their ambitions, and that these are applied in a predetermined mechanism that is not subject to unnecessary further negotiations between the Commission and Member States. This will allow for the automatic application of sanctions/fines and allow Member States and affected stakeholders to better project the financial implications of missing targets. There needs to be an improvement in transparency over the current sanctions for states not meeting their 2020 renewable energy targets.

It would be considered that financial support from existing funds (e.g. Modernisation Fund) only be granted on the condition that Member States comply with their RES pledges and thus give their fair share in achieving the common 27% target.

An alternative could be the creation of new funds, financed by those Member States whose contribution falls below the indicative benchmarks. Taking into consideration the different maturity levels, specific barriers, and risk profiles of various renewable energy technologies, part of the EU funding could be distributed through EU-wide tender systems granting a long term premium. In addition, other smart financial mechanisms could be developed for small-scale renewable technologies to tap into their future potential.

Also critical is a workable review period, as the proposed five-year reviews will not be effective in keeping progress on track and should be shortened significantly to a one or two year review. A five year review is not appropriate and risks plans being given insufficient attention if they can be ‘kicked into the long grass’ for several years.

**What are the implications of a strengthened EU approach to energy governance? What are the implications of not making swift progress towards a new – and clear – governance system?**

If the EU 2030 targets are to be realised, it is essential that the energy governance is strong. Past experiences have clearly demonstrated that targets without strong governance are unlikely to be met. We do not believe strengthened EU energy governance will undermine member states’ freedom to determine their energy mix, as it is up to the member states which low carbon technologies and policy options are right for them. Seeing that all EU member states have agreed to the EU wide carbon reduction and renewable targets, they have all accepted that some new policy must be introduced to meet said target, even in their own member state.

The implications of not making swift progress towards a new and clear governance system are the creation of political uncertainty, investor uncertainty, and consequent collapse in development and investment. With several countries facing looming projected shortfalls in capacity this can only be negative for the energy system as a whole.

However, it is also crucial that in the progress towards a new governance system the ‘old’ 2020 targets are not cancelled or forgotten in efforts to move the goal post and avoid any sanctions. This will surely undermine current policy and market confidence in these and any future system. Any Member State not meeting their legally binding national 2020 targets should be sanctioned as agreed to in the overarching governance framework in line with the transparent procedure necessary for this.

**If National Energy and Climate Plans were to be the basis for a strengthened governance, who should be responsible for assessment, review and enforcement? How can transparency of that process be assured?**

The European Commission should provide a template for the national plans ensuring consistency and comparability among all Member States, this will assist in ensuring transparency for the process. The template should build upon existing renewable energy national plans and preserve reporting on trajectories and policy developments per sector, type of renewable energy sources and enabling technologies (for instance CHP, district heating and cooling, and heat pumps).

A clear timeline needs be defined for the submission of national plans. December 2017 may be an appropriate deadline for submitting a first draft. Taking into account related EU legislation, national plans should be updated well before 2020, thereby enabling Member States to develop stable policy frameworks to implement their 2030 renewable energy contributions and provide an advanced framework for investors to base decisions on and build confidence in the direction of travel.

**What role should regional co-operation play in any new governance system? How can regional co-operation help to overcome the potential tensions between national and EU policy objectives?**

We do not propose to respond to this question.

**Should a new governance framework be enshrined in legislation?**

The governance regime should be enshrined in legislation and agreed upon in co-decision well ahead of 2020 to provide investor confidence in the post-2020 period. For the renewables-related elements, this should be done as part of the post-2020 Renewable Energy Directive planned for 2016-2017.

2 October 2015

## Renewable Energy Systems Ltd (RES)—Written Evidence

### Capacity mechanisms are being introduced by some Member States in order to assure national security of supply.

- *How might the development of some form of governance system mitigate any impact of separate national capacity mechanisms on the EU's energy policy?*
- *How far can co-ordination of such mechanisms go before it becomes politically unacceptable?*
- *How has this tension between EU and national objectives been handled thus far?*

The Commission's current consultation on EU Electricity Market Design presents a valuable opportunity to address this issue and make the electricity market fit for clean, decentralised, secure and flexible generation. Reviewing capacity markets, it is our view that national capacity mechanisms are inefficient and often unnecessary due to oversupply (rather than low capacity) in Member States, consequently undermining wholesale price signals. Regional capacity mechanisms, with common methodologies for calculating capacity, could provide more efficient investment. Flexible and enabling technologies such as DSM and storage should also be facilitated in the electricity market – a technology-neutral approach should be encouraged.

**The October 2014 European Council agreed that the EU should cut its greenhouse gas emissions by at least 40% by 2030 compared to 1990 and that this should be delivered through a range of measures including renewable energy: “An EU target of at least 27% is set for the share of renewable energy consumed in the EU in 2030. This target will be binding at EU level.” This contrasts to the 20% renewable target by 2020 which has binding national targets for each Member State.**

- How could a governance mechanism assist the EU to deliver its stated policy, including not only the 27% renewables target but the overarching 40% emissions reduction target which relies in part on the renewables target?
- How robust could a governance mechanism be without compromising Member State responsibility for their national energy mix?

We welcome the objectives of the Energy Union to provide secure, sustainable, competitive, affordable energy for every European. The five stated ways to achieve this are energy security through diversity of supply; a fully-integrated internal energy market; energy efficiency; research & innovation; and decarbonisation of the economy. The latter includes an ambitious climate policy that enforces the 2030 framework for energy and climate, with an objective to become ‘number one in renewables’.

This ambition is to be welcomed. Recently published scenarios<sup>53</sup> have set out how wind energy alone could meet 24% of the EU's power demand by 2030, with the right policies in place, and as much as 31% with more ambitious policies– i.e. exceeding the 2030 targets, full

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<sup>53</sup> EWEA Wind Energy Scenarios for 2030, August 2015 <http://www.ewea.org/publications/reports/wind-energy-scenarios-for-2030/>

reform of the ETS and the 15% interconnection target met. 31% would create 366,000 jobs and deliver €591 bn of investment. The wind industry, including our business based in the UK but active in eight Member States, is ready to step up to this challenge and deliver some of the cheapest low carbon technologies deployable at scale.

Maintaining global leadership against other trading blocs, however, requires strong home markets with clear growth driven by private investment. One of the EU's competitive advantages is that such investment is underpinned by the rule of law and we therefore support a robust and transparent governance process, enshrined in legislation, for the 2030 energy and climate framework. This will provide policy clarity and stability, less vulnerable to short-term and unpredictable political intervention. We have seen the impact of such intervention in many individual Member States recently, including the UK, with damaging consequences for renewables growth and jobs. Reducing political risk boosts investor confidence, driving down costs to the ultimate benefit of energy consumers.

We welcomed the 2030 energy and climate framework agreed in late 2014, including the renewable energy target of 'at least 27%'. Targets demonstrably drive investment and deployment and, since neither the wholesale power price nor the carbon price are currently high enough to provide adequate investment signals, targets that create demand and provide clear trajectories for deployment are essential in creating a competitive market.

As the 2030 renewables target is set at EU-level only and Member States did not agree to nationally-binding targets (unlike for 2020), it is even more important that the EU-wide target is underpinned by a robust governance system that is based on the principles of effectiveness, transparency, accountability and legitimacy. Transparency is essential for the confidence of investors, allowing us to deliver cost-effectively. Legitimacy is important if all Member States are going to be signed-up to the common objective and willing to contribute fairly. Member States have retained the flexibility to decide their own energy mix but at EU level, a voluntary and non-binding approach in implementing the target is unlikely to be effective or cost-efficient. A voluntary approach is also at odds with the Conclusions of the Heads of State of Government from October 2014 and March 2015, which called for the governance system to be credible and robust and built on the building blocks of existing governance.

A robust governance system includes targets, measures, streamlined reporting requirements and a clear role for the Commission in ensuring that Member States deliver the 27% target collectively by the deadline. Key elements are:

- The definition of a clear timeline for Member States to declare their renewable energy contributions that collectively meet the target
- Capitalising on existing processes, in particular National Renewable Energy Plans (ie don't reinvent the wheel if the aim is to minimise administrative burdens)
- A reinforced oversight for the European Commission, with the ability to intervene if Member States deviate from national pledges or bring in damaging retroactive changes to their regulatory regimes
- A strong legal basis, enshrined in a post-2020 Renewables Directive to be tabled in 2016

We recommend that this is agreed and put into place as early as possible, in order to provide businesses in the sector with the clarity, visibility and stability that they require to make investment decisions (often with long lead-times) in the market. This will help ensure that the 2030 legally-binding targets are met cost-effectively, for the benefit of consumers as well as continued growth in low carbon energy infrastructure.

The 40% target for reducing greenhouse gas emissions is to be welcomed and it is hoped that the EU and the UK will together play a positive leading role at the Paris Climate Talks. It should be noted that this and the Emissions Trading Scheme alone will not, however, be sufficient in driving investment in renewables or the low carbon energy sector as a whole. The ETS has not been successful in setting an investable carbon price – it is unreliable and far too low to match decarbonisation ambitions. The ETS needs significant structural reform to address the oversupply of allowances. The Market Stability Reserve is a step in the right direction but far from enough. The ETS alone will not deliver investments in renewable energy: governance and market design are essential pieces of the puzzle and will provide the business case for investment.

**What are the implications of a strengthened EU approach to energy governance? What are the implications of not making swift progress towards a new – and clear – governance system?**

As set out in answer to question 2 above, a strengthened EU approach to energy governance, based in legislation, will provide legitimacy, accountability and visibility on policy direction, leading to greater clarity and certainty for investors, reducing risk and leading to more cost-effective delivery of the legally-binding targets. Slow progress and lack of clarity could dissuade investors, slow down low carbon growth in Member State markets and damage the competitiveness of the EU. Since we already have processes that provide the building blocks for the governance system, action can be both swift and effective.

**If National Energy and Climate Plans were to be the basis for a strengthened governance, who should be responsible for assessment, review and enforcement? How can transparency of that process be assured?**

Credible long-term plans from Member States are an essential element in meeting the 2030 energy and climate framework targets. The National Renewable Energy Plans will be a key element of this. As set out above, the Commission has a key role to play in governing the process of assessment, review and enforcement. Clear reporting rules are essential in order to measure progress and identify shortfalls at an early stage, ensuring cost-effective remedial action. Setting this in law through a legislative process with key milestones will ensure legitimacy and trust. A democratic, transparent process is in the interests of all stakeholders – Member States, the Commission, investors, business and consumers.

**What role should regional co-operation play in any new governance system? How can regional co-operation help to overcome the potential tensions between national and EU policy objectives?**

Regional cooperation is a key theme of the Energy Union and a joined-up approach, with increased coordination and the development of common market arrangements through electricity market design reform, is an essential part of a strengthened EU approach to governance. This can complement, rather than contradict, the national flexibility and control that Member States wish to retain. Regional cooperation can support the objective of

energy security. Measures to ensure that the EU renewable energy target is met also support this objective – an increase in indigenous renewable energy on the system increases diversity and provides protection against supply shocks from imports.

**Should a new governance framework be enshrined in legislation?**

Yes. As set out above, as an investor in renewable energy we believe that the governance system needs a strong legal basis and should be enshrined in the post-2020 Renewables Directive to be tabled in 2016 with a defined role for the Commission. The current Directive has been extremely successful in driving investment and deployment to 2020. For 2030, Member States have retained more flexibility to define their own national energy mix as there are no longer legally-binding renewables targets at national level. Cooperation, dialogue and coordination between Member States will be essential. However, governance underpinned by the rule of law will provide legitimacy, visibility and certainty that minimises political risk, increases investor confidence and reduces costs, leading to cost-effective market-driven decarbonisation for the benefit of business and the consumer.

5 October 2015

## **Royal Society for the Protection of Birds (RSPB)—Written Evidence**

There is a growing gap between UK and EU commitments on climate action and the credibility of mechanisms in place to achieve our binding targets to reduce emissions through energy saving and renewables investment. Member States need to take more responsibility for developing their energy mixes in line with their own commitments on climate change and biodiversity.

The RSPB is Europe's largest wildlife conservation organisation, with over 1.1 million members. In addition to owning and managing nature reserves, we work with industry and decision makers to promote sustainable economic development and land use. We are the UK Partner of BirdLife International, a global alliance of bird and wildlife conservation NGOs.

Climate change is the greatest threat facing global biodiversity. We want to see the UK, Europe and the world making ambitious, evidence-based and firm commitments to preventing dangerous climate change. This will require massive investment in renewable energy and infrastructure such as power lines. If these investments are poorly planned, this creates risks to protected species and habitats and compliance risks for investors.

With appropriate governance, UK and EU decarbonisation can be achieved with greater certainty, and in harmony with nature.

Our key recommendations are:

- Climate change poses grave threats to nature and society: we need more certainty that EU Member States will decarbonise their energy mixes.
- EU energy governance can reinforce, rather than undermine, Member States' sovereignty over their energy mixes.
- National energy planning can also help to reduce impacts on nature and build public support for necessary policies and investments.
- In the absence of binding targets on energy saving and renewable energy, the European Commission should set indicative targets for Member States, monitor progress and be able to take corrective action where necessary.
- National Energy and Climate Plans should be: developed to a common format and be subject to revision every few years; developed and revised in consultation with national and EU-regional environmental authorities, stakeholders and the public, taking environmental impacts into account.

**How could a governance mechanism assist the EU to deliver its stated policy, including not only the 27% renewables target but the overarching 40% emissions reduction target which relies in part on the renewables target?**

The design of the governance mechanism, and the effectiveness of its implementation, will be important in determining: accountability for delivery, and the scope for monitoring progress and taking corrective action; the cost and perceived fairness of the regime; the scope for

rational and efficient delivery of a low carbon economy; the scope for the renewables and emissions targets to be achieved in harmony with the natural environment; and the scope for public and NGO consultation and participation in development of policies and plans for delivery.

We recommend that national energy planning should be a requirement in the governance mechanism, and that these plans should be ‘binding’ (but subject to regular review), and should follow a single template. Policies to enable delivery should be developed in accordance with a new RES Directive.

National plans should specify target additional capacities for major classes of energy infrastructure, and should justify these in terms of the availability of suitable locations for deployment and natural resources for their sustainable delivery. In the absence of binding Member State targets, the planned capacities should be in line with the achievement of indicative national renewable energy benchmarks set by the EU.

Energy policies and plans must not only be credible, they need public support. The governance mechanism can assist here by helping to keep environmental impacts down, and ensuring public participation and access to information in the process. These considerations, elaborated below, are essential for building and maintaining public support for the policies and investments needed for the energy transition.

### **How robust could a governance mechanism be without compromising Member State responsibility for their national energy mix?**

Delivery of the binding emissions target will not be possible without massive investment in energy efficiency, renewable energy and associated infrastructure such as electricity transmission capacity. In the absence of effectively binding national targets for energy saving and renewables, the governance mechanism will need to be very robust if it is to ensure delivery of the targets in a way that is fit for purpose, affordable and acceptable to the public.

The current situation in the UK (and a possible direction of travel in the EU energy market) is characterised by high-level commitment to decarbonisation goals but not to credible means of achieving them. In the UK this is reflected in the increasing absence of national targets, plans and support schemes for the deployment of specific renewable energy technologies.

A similar situation will prevail across Europe post 2020 if the new governance mechanism does not strengthen national planning so that it indicates a clear direction of travel for stakeholders and investors. Having no clear steer on the future shape of the energy system undermines confidence among investors. It also damages public support if the public and NGOs are unconvinced that the resulting policies, public expenditure and infrastructure investments are, in fact, contributing to a sustainable, affordable and secure future energy system.

We recommend strengthening national climate and energy planning to create firm building blocks for an effective and politically acceptable EU governance system. A robust mechanism is needed to ensure Member State take responsibility for their national energy mixes.

Where Member State do take responsibility for their national energy mixes and plan for delivery ‘on the ground’, this enables impacts on the natural environment to be taken into



consideration from the earliest planning stages, and for these to be avoided and minimised in delivery. Regional and national energy plans should be developed through a process of Strategic Environmental Assessment, to ensure they also promote environmental goals relating to climate change and nature protection. Where national energy planning has adopted these principles, for example in Portugal and France, there have been significant benefits in terms of NGO and public support.

**What are the implications of a strengthened EU approach to energy governance? What are the implications of not making swift progress towards a new – and clear – governance system?**

A strengthened approach would provide greater certainty that the UK and EU will deliver on our commitments to prevent dangerous climate change, enable a better protected environment and build greater NGO and public support for action on climate change and energy system investments. Failure to agree on a clear and robust governance mechanism would have the opposite consequences: more climate risk to people and nature, greater direct loss of biodiversity and environmental degradation associated with development, and more public opposition, delays and costs as a result.

Swift progress towards a robust mechanism is needed to restore stakeholder and investor confidence as 2020 approaches. It would be very risky to agree on a weak mechanism initially in the hope of strengthening it later, if it fails to deliver. Lessons from the last two decades of EU policy on climate change and renewables has shown what works well and what does not.

Lessons from the current EU climate and energy framework to 2020 must be applied in the design of the post 2020 mechanism. Some elements have worked very well, and should be retained. For example target setting and sanctions for non-delivery in the renewables sector have been highly successful in prompting Member States to develop and implement policies that have led to high levels of investment and falling costs.

The 2009 Renewable Energy Directive (RED) also contained sustainability criteria for biofuels and bioliquids. In the post 2020 framework such criteria need updating and extending to all forms of bioenergy to ensure its use (i) makes a real contribution to reducing emissions and (ii) is achievable with the natural resources available and without unacceptable impacts on the natural environment.

An important lesson from the 2020 framework relates to the importance of the existing environmental Directives in enabling sensitive development of energy infrastructures. We know from our work with grid operators<sup>54</sup> that having a stable, clear and common legislative framework to protect Europe's biodiversity has been a positive benefit in enabling project planning and in securing public acceptance of new power lines. In their responses to the EU Fitness Check of the Birds and Habitats Directives, European grid operators (members of the Renewables Grid Initiative serving over 350 million European consumers) and the UK energy industry (EnergyUK), have both called for the Birds and Habitats Directives to be retained and implemented better.

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<sup>54</sup> The RSPB are members of the Renewables Grid Initiative, through which national transmission system operators and NGOs work together to improve public support for sustainable grid development ([www.renewables-grid.eu](http://www.renewables-grid.eu)).

In addition to providing certainty for developers, the existing environmental protection legislation provides essential safeguards for the environment. Too often, however, these safeguards are only effectively implemented at a late stage in project delivery, when developers have already made significant commitments and expenditures. In an unplanned energy transition, project promoters will inevitably pursue many investments that prove to be unacceptable from a nature conservation perspective. Safeguards need to be built into planning at earlier stages, thereby reducing risks for nature and also for developers.

EU environmental law requires Strategic Environmental Assessment (Directive 2001/42) for certain plans and programmes. It can provide a structured process through which stakeholders and the public are given the opportunity to engage with, and contribute to shaping, the future national energy mix. It addresses a broad range of issues (in addition to impacts on biodiversity) that greatly affect public attitudes towards development, such as effects on landscapes and human health. Additional economic and social considerations can be addressed in parallel in the process.

If Strategic Environmental Assessment is done well it improves the sustainability of the plan, helps build public support and enables more streamlined assessment and consenting of specific projects. However Strategic Environmental Assessment is often used poorly or not at all in energy planning. Steps should be taken in EU energy governance to ensure it is required in national energy planning.

**If National Energy and Climate Plans were to be the basis for a strengthened governance, who should be responsible for assessment, review and enforcement? How can transparency of that process be assured?**

The European Commission should facilitate assessment and review of National Energy and Climate Plans (NECPs), involving other regional Member State, national authorities, stakeholders and the public. Plans should be developed in line with indicative (if not binding) national targets on renewables and energy saving, and must be achievable within ecological limits (such as the availability of sustainable biomass resources and suitable sites for renewable energy deployment). Member States should be accountable for progress on delivery of their plan, and for periodic revisions in dialogue with the Commission and other Member State through regional cooperation forums.

The requirements for development of National Renewable Energy Action Plans in the 2009 RED should be retained and strengthened in the post 2020 National Energy and Climate Plans (NECPs). Again a common template should structure the plans, to enable the Commission to monitor their adequacy and take corrective action if necessary. It is essential that NECPs, in aggregate, should be capable of achieving the EU's climate and energy targets. As such they cannot avoid specifying indicative targets for deployment of specific technologies and classes of technology. These targets should be 'binding' in the sense that Member State (and regional peers) must be accountable for introducing policies that are adequate for their achievement. Regular review of the plans and enabling policy frameworks will be necessary, for example every three years.

With a requirement for meaningful NECPs in place there would be an opportunity to require the plans to be developed taking into account impacts on the environment and in consultation with environmental authorities, stakeholders and the public through Strategic Environmental Assessment. In this way NECPs can provide the building blocks for a bottom-

up and regional approach that creates a real momentum towards our common energy and environmental goals.

For the purpose of assessing and reviewing the sustainability of the plan through Strategic Environmental Assessment, the responsible authority (in the UK, DECC) should facilitate a structured process that guarantees access to information and opportunities to participate to other regional Member States, environmental authorities, stakeholders and the public. The assessment should be undertaken in parallel with development of the plan, and its findings should inform the plan to ensure it is compatible with environmental objectives.

**What role should regional co-operation play in any new governance system?  
How can regional co-operation help to overcome the potential tensions between national and EU policy objectives?**

Regional cooperation makes a lot of sense for delivery of a sustainable energy transition. Energy markets are increasingly becoming more integrated across borders, and sustainability issues such as climate change and protection of wildlife are inherently international in nature. Regional bodies could play valuable roles in helping to develop and in reviewing their Member State NECPs, including in assessment of environmental impacts and ensuring the plans are environmentally acceptable.

It is clear that the EU is not ready for a fully integrated free market in energy, nor is there an appetite for strongly top-down EU energy governance. In these contexts, regional solutions have a lot to offer. However it is difficult to see how they can have any formal accountability for delivery against targets that are binding on Member State or on the EU itself.

For cooperation to be meaningful and effective, Member States need a firm basis upon which to cooperate. Given that Member State sovereignty over their energy mixes is protected by the Treaty, the underlying basis of future regional cooperation will have to be national plans, for which Member State are accountable. Only the European Commission can have the necessary impartiality and overview needed to ensure coherence between regional approaches and overall delivery on international climate change commitments.

Regional cooperation has proven to be increasingly necessary and useful in electricity transmission planning, for example through the Regional Group structure established under the Energy Infrastructure Regulation (347/2013). However lessons should be learned from the shortcomings in the functioning of the TEN-E Regional Groups<sup>55</sup> which have decision making powers under the Regulation. Regional cooperation mechanisms must (i) be transparent in their operations and decision making (ii) undertake meaningful consultation with stakeholders and the public, and (iii) only promote energy objectives and major investments that can be delivered in line with Europe's environmental commitments and legislation.

**Should a new governance framework be enshrined in legislation?**

As a minimum the EU will need powers to (i) require NECPs to be developed and reviewed under a common reporting framework that enables monitoring of progress towards achieving indicative Member State targets and overall EU targets (ii) take corrective actions

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<sup>55</sup> See Connecting Energy, Protecting Nature for BirdLife and the EEB's criticisms of the governance under the TEN-E regulation.

where progress is insufficient, i.e. to propose corrective measures and undertake infringement procedures where these are not applied, and/or to direct existing and new EU funds so that they incentivise achievement of the indicative national targets. Detailed governance arrangements should be specified in new Directives on, inter alia, renewable energy and energy saving.

5 October 2015

## Scottish Carbon Capture and Storage (SCCS)—Written Evidence

### Carbon Capture and Storage in the European Union:

There is at present a considerable mismatch between the overall aspirations for CCS in the EU as a contributor towards achieving the EUs' climate mitigation objectives, and the current level of CCS development, deployment, and associated political focus on its support.

The European CCS funding support instruments (European Economic Recovery Plan, and New Entrants Reserve 300) have failed to deliver on the 2007 European Council's ambition for "up to 12 CCS demonstration projects on power and industry". To date the EU Emissions Trading Scheme has failed to provide a financially credible (high enough and sufficiently stable) carbon price to support CCS development. While the on-going ETS reform package for phase IV is welcomed the predicted carbon prices are unlikely to enable CCS retrofitting or new deployment, especially as it is expected that many industrial sectors will continue to benefit from an allocation of some proportion of 'free allowances'.

Currently only two Member States (the UK and the Netherlands) are actively supporting the development of specific commercial scale projects.<sup>56</sup> Norway (EEA area) has operated commercial CCS projects since 1966 and 2008. The UK is evaluating two 'commercialisation projects', for funding decisions early in 2016. The Netherlands project is negotiating funding support from Netherlands, Norway, France and Germany.

However, CCS remains critical to the delivery of the EU's emissions reduction targets, especially for addressing industrial emissions for which there is no other available technology.<sup>57</sup> CCS has repeatedly been demonstrated to be a key component of a secure, cost-effective low carbon EU energy system,<sup>58</sup> with the absence of CCS in some studies found to double the cost of achieving 2050 decarbonisation objectives.

Europe has substantial opportunities for technologically and commercially deliverable, secure geological CO<sub>2</sub> storage, particularly in the North Sea region. These have sufficient capacity for many decades worth of EU emissions. However other than the UK, Netherlands and Denmark, sources of CO<sub>2</sub> emissions and appropriate and socially permitted geologies for CO<sub>2</sub> storage are in most cases not co-located. The infrastructure required to connect them is as yet non-existent. This presents two specific challenges at European scale: first the confirmation of sufficient CO<sub>2</sub> storage capacity, and second the provision of (trans-boundary) access to that CO<sub>2</sub> storage capacity for Member States without deliverable domestic CO<sub>2</sub> storage. Addressing both of these requires strategic action coordinated at European level due to the considerable (multi-years to decade) lead times associated with geological appraisal and infrastructure delivery for trans-boundary transportation by pipeline and/or shipping.

### CCS in the EU Energy Union

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<sup>56</sup> Peterhead, UK; White Rose, UK; Caledonia, UK; ROAD, NL.

<sup>57</sup> CCS on commercial industry plant e.g. steel production is in build in other world regions demonstrating that technological immaturity is not a significant barrier to its application.

<sup>58</sup> EU Energy 2050 Roadmap, IEA Energy Technology Perspectives, Energy Technology Institute.

The Commission’s Energy Union Communication<sup>59</sup> (February 2015) as part of the “Energy Union for Research, Innovation and Competitiveness” recognises that CCS for power and industrial sectors “will be critical to reaching the 2050 climate objectives in a cost-effective way”. However, CCS is labelled not among the four Energy Union “core priorities”, but as an “additional priority” for Member States who “want to use these technologies”.

This raises the question as to which Member States might consider CCS to be needed as part of their decarbonisation in order to achieve both the EU 2030 target of 40% emissions reductions, and be on a pathway towards the 2050 objective of 80-95% reduction in emissions. Currently, the power sector and industry are the first and third largest contributors respectively to EU emissions, and these proportions are generally maintained at individual Member State level.<sup>60</sup> Thus, if Member States wish to retain their industrial sectors (and associated jobs and investment), and/or the option of coal or gas power generation it appears that the majority of Member States will require to enact CCS for their emissions reduction obligations to be met.

### **Implications for Energy Union governance**

CCS requires active inclusion in the development of Energy Union governance in order for the Energy Union objectives to be achieved. Primarily, this will concern the development, assessment and realisation of Member State’s Energy and Climate National Plans.

It is likely that the majority of Member States will need to include CCS, in particular for industrial sources, in (or even prior to) the 2030s. The need for inclusion of CCS to deliver Member State outlooks to 2050 seems even more inevitable. Coherent delivery of these CCS contributions will need provision of both an investible business model, and the upfront identification, investigation and licensing of sufficient CO<sub>2</sub> storage capacity with an identified and deliverable means of access (CO<sub>2</sub> transport link). For the latter, the realities of European geography and geology suggest that in many cases substantial trans-boundary shipment and storage of CO<sub>2</sub> will be a necessity. Thus, the successful deployment of CCS by many Member States will likely be conditional on effective regional plans to develop shared CO<sub>2</sub> storage resources and connecting transportation infrastructures.

In this respect questions 1, 2 and 3-6 (‘looking forward’) of this call for evidence are now considered:

#### *Capacity Mechanisms*

National capacity mechanisms, as currently designed, represent an inefficient, distorting and temporary solution to the need for flexible on-demand generation to support the growing proportion of intermittent renewable generation. Instead, security of supply should be addressed through both improved interconnection of national grid systems and the development of low-carbon on-demand supply including CCS on gas and coal power plant.

The construction and operation of early CCS projects can be supported through subsidy that recognises the relative technological immaturity of CCS and the high value of low-

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<sup>59</sup> A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy (25 February 2015) [http://eur-lex.europa.eu/resource.html?uri=cellar:1bd46c90-bdd4-11e4-bbe1-01aa75ed71a1.0001.03/DOC\\_1&format=PDF](http://eur-lex.europa.eu/resource.html?uri=cellar:1bd46c90-bdd4-11e4-bbe1-01aa75ed71a1.0001.03/DOC_1&format=PDF)

<sup>60</sup> Eurostat: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Greenhouse\\_gas\\_emissions\\_by\\_industries\\_and\\_households](http://ec.europa.eu/eurostat/statistics-explained/index.php/Greenhouse_gas_emissions_by_industries_and_households)

carbon on-demand generation as part of power supply systems. Such subsidy should ideally be coordinated between Member States and existing EU instruments (ETS) to prevent further distortions. Currently a renewed ETS derived Innovation Fund is intended to support CCS projects. This should learn from the failure of its predecessor and explore financing models such as a price-per-clean unit of generation or industrial product minus the current EU-ETS price. Specifically this could engage industrial emitters, where CCS delivery has so far proven intractable in the EU, even though CO<sub>2</sub> capture from some industrial sectors is technologically a low cost opportunity. A certificates system, obliging CO<sub>2</sub> storage or purchase of stored CO<sub>2</sub> on a proportion of both domestically extracted and imported fossil fuels should also be considered – this would revolutionise the investment and action by large corporates on carbon disposal.<sup>61</sup>

### *Renewable Energy Targets*

The agreed 2030 Climate and Energy targets present a confusing compromise of Member State perspectives. It is unclear how an EU-wide target for renewable-energy share without specified Member State contributions is to be administered. How might CCS delivery, beneficial to all, be accounted for within this structure? Can Member States (UK, NL) willing to advance CCS and develop CO<sub>2</sub> storage as an essential low-carbon technology receive credit for this contribution towards the overarching 40% GHG reduction target? This could perhaps be manifested in the form of a carbon reduction calculation rather than a renewable technology-share choice calculation, with CCS replacing a proportionally reduced obligation to contribute to the EU-wide 27% renewables target.<sup>62</sup> This should be conditional on provision of access to CO<sub>2</sub> storage for other Member States. The EU could facilitate connection between ‘stranded’ emitters and CO<sub>2</sub> storage as part of Climate National Plan assessment (see below) with assistance from the renewed Projects of Common Interest.

### **What are the implications of a strengthened EU approach to energy governance? What are the implications of not making swift progress towards a new and clear governance system?**

Given the current general under-achievement of CCS delivery across the EU a strengthened EU approach to energy governance could provide much needed impetus and support. This should formally recognise the critical need for CCS delivery (rather than just a research agenda), and help put in place measures to support both the investment case for CCS projects across the EU (supplementing the EU ETS and able to contribute to both capex and opex), and as appropriate the development of domestic CO<sub>2</sub> storage capability or facilitation of trans-boundary access to CO<sub>2</sub> storage. As such, the current leadership in developing CCS projects by individual Member States should be recognised as beneficial to the EU as a whole and receive greater formal EU support.

### **If National Energy and Climate Plans were to be the basis for a strengthened governance, who should be responsible for assessment, review and enforcement? How can transparency of that process be assured?**

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<sup>61</sup> Certificates for CCS at reduced public cost  
<http://www.sccs.org.uk/images/expertise/reports/working-papers/wp-2015-04.pdf>

<sup>62</sup> Here, the possible overlap between ‘renewable’ biomass (subject to sustainability) and its potential for combination with CCS (in biofuel or power production) also needs to be considered by Member States and the Commission.

Due to the likely need for some Member States to access non-domestic CO<sub>2</sub> storage, the role of CCS in individual National Energy and Climate Plans cannot coherently be treated in isolation (simply ‘added’ up). Therefore, any assessment of Plans will need to collate activities across the EU to calculate the balance between intended CCS contributions and available CO<sub>2</sub> storage capacities and review the appropriateness of collaboration between ‘source’ Member States and potential ‘store’ Member States. Given this cross-EU context the Commission should take a leading role in such assessment and periodically query any CCS contributions present in Plans where it appears inadequate preparatory action is being taken making a shortfall likely.

Here, it is important that Plans do not simply reach 2030 and stop, but are extended (at least indicatively) to achieve the 2050 objective, and that these extensions receive proper and public scrutiny. This will make very clear the blunt choice between the establishment of CCS or the closure of energy-intensive industries. The Commission should support this by making the EU Reference Scenario it produces for guidance extend to 2050.

**What role should regional co-operation play in any new governance system?  
How can regional co-operation help to overcome the potential tensions between national and EU policy objectives?**

Due to the different locations of emissions clusters and CO<sub>2</sub> storage provision (as outlined above) enhanced regional cooperation is critical to the timely delivery of the CCS contribution to the EU’s decarbonisation. In many instances the EU’s industrial regions appear much more aware of the importance of CCS to their futures than Member State governments. It would be productive for the EU to support the creation of an industrial regions CCS platform, that building on the work undertaken in Teesside, Yorkshire, Scotland, Rotterdam and Antwerp,<sup>63</sup> could develop industrial CCS strategies and collaborate on designing and delivering EU-supported Projects of Common Interest in CO<sub>2</sub> transportation infrastructures.

**Should a new governance framework be enshrined in legislation?**

With respect specifically to CCS, legislation should recognise the critical need for its delivery, give credit for CCS leadership by individual Member States (see Q2), and give proactive support to regional cooperation to enable EU-wide deployment. Moreover, a broader legislative framework should present the delivery of the agreed 2030 climate and energy targets not as a hard stop followed by complete overhaul (as with the 2020 targets), but as a stage on a pathway towards achieving the 2050 decarbonisation goals. This would increase investment certainty in large energy infrastructures (including CCS) that require sustained confidence in long-term policy intent and stability.

2 October 2015

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<sup>63</sup> Teesside Collective, CO<sub>2</sub>Sense Yorkshire, Scottish Enterprise and SCCS, Rotterdam Climate Initiative, Antwerp Port Authority.



## **Tempus Energy Technology Ltd—Written Evidence**

Tempus Energy welcomes the House of Lord's inquiry into the EU Energy Union's governance structure. It is highly timely to discuss what the future EU single energy market will look like, given recent concerns about subsidiarity and a pull in two opposite directions; creating a single, liberalized EU energy market on the one hand and the wish of some Member States to have a more national approach to energy policy on the other hand.

Tempus Energy has the pleasure of providing the below evidence on the lack of an effective strategy of ensuring that the EU has properly functioning and harmonized energy markets before prematurely looking for national, expensive and (mostly) polluting solutions in Capacity Mechanisms ('CMs'). If the House of Lords Energy and Environment Sub-Committee would like to know more about this topic, Tempus Energy would be honoured to give oral evidence at the House of Lords.

The EU Energy Union is envisaged to be the overall political vision of creating a genuinely harmonized energy market across the EU's twenty-eight Member States. The process of harmonization has been moving ahead, slowly yet steadily, since the first energy package of 1996-1998 and has now culminated in power markets being coupled across all of Western Europe (spanning eighteen Member States).

### **Case Study One (national energy security): Capacity Mechanisms**

Tempus Energy believes that the closer the EU moves to (while respecting the principle of subsidiarity) regional, competitive, liquid and transparent electricity markets which reflect actual scarcity in their prices, the less likely such markets are to need CMs. On the contrary, subsidy schemes such as CMs would be an expensive obstacle to market harmonization and integration.

For the above reason CMs should not be taken for granted as a fundamental aspect of an energy market and should not distract from proper market harmonization and integration as per the Third Energy Package and current Energy Union vision.

First and foremost, Member States and the EU in tandem should focus efforts on harmonization of the fragmented energy markets in the EU, on fully implementing and enforcing the provisions of the Third Energy Package and subsequently on ensuring markets remain competitive to provide security of supply and lower energy prices to consumers.

Secondly, in line with the European Commission's current consultation on new market design rules, once the various Member State markets become more integrated (which is already happening in power markets in Western Europe) this will provide additional system resilience, competition will drive prices down and renewable energy will be better able to compete on a market basis. To achieve this objective interconnection between Member States needs to be incentivized and promoted in order to have the physical infrastructure ready for a single energy market. In addition capacity on the demand side, such as demand flexibility needs to be properly incentivized as it can offer an extremely cost-effective solution to meeting energy demand. By focusing on CMs we physically and financially endanger connecting Europe's energy markets.

Considering the above, but also the fact that there are various on-going investigations into energy markets and capacity mechanisms in Europe, Tempus Energy believes that a

discussion around governance of CMs is premature. For example the CMA investigation into the GB electricity market and the European Commission's Sector Inquiry into CMs across the EU (with the exception of the CM in GB) are still on-going. Further, Tempus Energy is currently challenging the Commission's decision to approve the UK's request for State aid to the power generating sector through a CM at the General Court of the EU.

Only once the above investigations are complete, as well as adequately harmonizing and integrating the EU's energy markets should the EU and its Member States look at backup solutions such as CMs in order to give the market a chance to operate as optimally as possible. Further, if there are system adequacy issues, it is highly advisable that the EU have a coordinated, transparent and non-discriminatory methodology for assessing system shortages and further, once designed, such mechanisms should always be as minimally distortive as possible in order not to endanger years of EU energy market harmonization and of course be technology neutral. If this approach is not followed, the ultimate losers will be energy consumers in the UK and across the EU.

2 October 2015

## UK Government – Oral Evidence (QQ 1-10)

WEDNESDAY 28 OCTOBER 2015

11 am

Witnesses: Andrea Leadsom MP and Tim Abraham

### Members present

Baroness Scott of Needham Market (Chairman)  
Lord Boswell of Aynho  
Lord Cunningham of Felling  
Lord Curry of Kirkharle  
Viscount Hanworth  
Lord Krebs  
Lord Rooker  
Lord Selkirk of Douglas  
Lord Trees  
Viscount Ullswater  
Baroness Wilcox

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### Examination of Witnesses

**Andrea Leadsom MP**, Minister of State, DECC, and **Tim Abraham**, Head of European Policy, DECC

**Q1 The Chairman:** Good morning. Minister, you are very welcome. This is your first time in front of this Committee, so we are very pleased to see you and, of course, Tim Abraham, who is very used to visiting the Committee. We are very much looking forward to hearing from you today. As you know, we are carrying out a short piece of work, but one that we think is very important, on the governance aspects of energy union. We know that your observations and thoughts will be really useful to us in forming our thinking. This is a formal evidence-taking session of the Committee. A full note will be taken and put on the public record in printed form and on the website. We will send you a copy of the transcript, which you can revise in case there are any minor errors, although there never are. This session is on the record. It is being webcast live and is accessible via the parliamentary website. You have received a copy of the interests declared by all members. I remind

members that if they have any relevant interests, they should declare them the first time that they speak in today's session. That would be very helpful. I am particularly pleased to have with us the Chairman of the EU Committee, Lord Boswell, who I know is an old friend of yours, on the hereditary principle.

**Andrea Leadsom:** Not quite. I think it is on the democratic principle.

**Lord Boswell of Aynho:** I should declare my interest, Chairman. Andrea Leadsom succeeded me as an MP.

**The Chairman:** It is very good to have continuity. The usual form in these things is to start off with some general points and then to come down to the specifics. Could I start by asking you to outline for us the UK Government's position overall on the direction that the energy union proposals are taking and, particularly, how you see the balance between member states' autonomy to determine their own energy mix, on the one hand, and the objectives of the energy union and closer working?

**Andrea Leadsom:** Thank you very much for having me. I am delighted to be here. This is an incredibly valuable hearing and I am looking forward to reading the results of it.

I would like to start by saying that the Government are very supportive of the development of the energy union. Effectively implemented, it should deliver the competitive, interconnected and fully functioning single energy market that should provide good value for money for consumers in the UK and across the EU. I can assure the Committee that, as we move towards the UK presidency, we will be active in pushing it forward. But—there is always a “but”—the energy union must not be a straitjacket for member states. We are very clear that it must respect member states' rights to determine their own energy mix and not constrain those policy choices that are best done at the national level, reflecting national circumstances and priorities.

Your current inquiry is extremely timely. After securing a good result on the 2030 framework at the European Council a year ago, minds in Brussels have now turned to considering how best to meet those 2030 objectives, as you know, and how to implement the energy union more generally. In answer to your request for general comments, we are supportive of the energy union but determined that it should not become a straitjacket for member states, which very clearly need to look at their own particular circumstances in determining their own energy mix and the delivery methods for it.

**The Chairman:** Thank you for the introduction. We will unpack some of that, in terms of how it is possible to create a governance framework that bridges the potential gaps between those two. I would like to start with Lord Cunningham.

**Q2 Lord Cunningham of Felling:** Minister, surely one of the fundamentals of energy security, which is what I will question you about, is that those countries that are most energy secure are those countries that are self-sufficient in energy. I wonder whether you think that the European framework will result in Britain importing more or less energy than it does now.

**Andrea Leadsom:** We are very supportive of the EU concept of voluntary regional co-operation. My sense, as someone who is new to energy since May, is that this is an extraordinarily complicated area. Energy policy has so many inputs. If you pull here, something moves there, so it is very important that you share best practice and ideas. There is no monopoly of good ideas. Regional co-operation on a voluntary basis can help all EU member states. Very specifically, regional co-operation at the power generation level can help all EU member states—for example, through interconnection, ensuring that power flows both ways, and through imported LNG. All of the co-operations that can be very well done at EU member state level on a voluntary basis can help to improve energy security. However, I come back to my original point, which is that it must not be prescriptive. We do not want a recipe that suits the EU from an energy security point of view, nor do we want the UK to be responsible for the bottom-line energy security of other member states, so it needs to be co-operative and voluntary. There is an enormous amount going for that sort of co-operation, sharing of best ideas and working together to improve overall energy security.

**Lord Cunningham of Felling:** I do not disagree with any of that. My question was: will this result in our importing more energy than we do now or less?

**Andrea Leadsom:** I am sorry; I apologise; I took your question to be rather more general. It certainly could do. It is very difficult to predict. As all member states have moved towards looking more closely at renewables, for example, we have issues of intermittency, which means literally that, if the wind is blowing or the sun is shining in one part of the European Union, it may be possible over time to benefit from that and, at the same time, for interconnection to provide us with more imported power at a time when we need it and, likewise, to export when we do not. It could lead to greater imports. It will lead to greater interconnectedness. It is very difficult to be absolutely clear about the net impact.

**Lord Cunningham of Felling:** Thank you for that. Since energy security is a key issue in all of this, will the proposal for the new EU energy supply approach make the UK more or less vulnerable in terms of energy security?

**Andrea Leadsom:** In the UK, as you know, we have introduced the capacity market, as have a number of EU member states, deliberately to address the fact that, with the increase of intermittent renewables producing power for the network in our different countries, we want to be assured of power supplies. The capacity market will provide that security of energy supply that we want to see. However, there is no doubt that more interconnectedness requires that you very carefully derate your expectations for imported energy so that you do not threaten your own energy security. Is there anything you want to add to that, Tim?

**Tim Abraham:** If the single market works properly, price signals will determine where energy flows. Therefore, on the whole, it should be better for all member states to join into one single market. That is why we are encouraging greater interconnection and so forth. To answer your first question, yes, it will very much depend on how the market works. However, if you believe in the single market, that is one of the aspects that we feel is better for the UK.

**Q3 Lord Rooker:** Good morning. I have an interest to declare, as a pro bono director of the Ludlow Hydro Co-op. We are fitting an Archimedes screw into the River Teme at Ludlow and will start generating energy early next year. It is 40% funded by the Chancellor of the Exchequer, I understand, so that does help. As far as the Government are concerned, do you have any red lines laid up in respect of energy security, beyond which you will not go?

**Andrea Leadsom:** Absolutely. The be-all and end-all purpose of DECC—the Department of Energy and Climate Change—is to keep the lights on, while decarbonising at the lowest cost to consumers. Ultimately, keeping the lights on is our complete focus, day in, day out. Keeping the lights on is non-negotiable. Energy security is absolutely our top priority. As I said, we have introduced the capacity market to ensure that, with the absolutely welcome increase in renewables, we do not at the same time, because of the fact that they are intermittent, end up compromising energy security. In direct answer to your question, energy security is everything. The red lines are around keeping the lights on and keeping enough of a buffer to make sure that we are never compromising energy security.

**Lord Rooker:** The red line is not keeping the lights on—the red line is how the buffer is made up. There must be mixes of energy—or loss of various capacities—beyond which you will say, “We are not letting that go”, in order to guarantee that the lights stay on.

**Andrea Leadsom:** I see what you mean. What you mean is—

**Lord Rooker:** The red line in generating the power to make sure that the lights stay on. Are there any areas where you say, “Beyond this we are not going”?

**Andrea Leadsom:** Not in the sense of by power plant or by technology, if that is what you mean. We would not say, “We absolutely must have 20% of coal-fired power generation. That is our red line”, or, “We must have x% of gas-fired power”, or, indeed, x% of interconnection. We do not look on it like that. The capacity market ensures that supply. As you may know, we have recently agreed that interconnectors can bid into the capacity market. We are the first EU member to achieve that approval. What we are looking at is the overall mix. We look very carefully at the likelihood of outages, of reverse flows in the case of interconnection, and of intermittency in the case of renewables, to ensure that we have the right balance. We do not say, “It has to be a minimum of this from renewables and that from coal”.

**Lord Rooker:** To follow up on what Lord Cunningham asked, does having an integrated market and an energy framework make the EU, rather than the UK, stronger or more vulnerable?

**Andrea Leadsom:** Definitely stronger. A single energy market provides us all with a greater number of options. Fundamentally, it provides some EU member states with energy security that they did not previously have. Those who were overexposed to Russian gas imports, for example, have found that the integration of EU energy markets—the ability to receive power through interconnection, overhead or underground, from other member states—has literally been an enormous increase in energy security for them. In the UK we are starting to benefit from greater interconnection. We certainly see that that improves our options for energy security. As I said, we will never compromise. For us, energy security is absolutely the first and last line.

**Viscount Hanworth:** You propose that the capacity market and interconnections are both ways of achieving energy security. It has also been said that we are encouraging greater interconnection. How are we encouraging greater interconnection, because I do not see very much happening in this connection?

**Andrea Leadsom:** We are determined to see competition and private sector investment in energy supply. Wherever possible, we are trying to introduce greater competition and to provide price signals. As you will know, we have the cap-and-floor arrangement for interconnectors, which has brought forward new projects. We are working very closely to encourage further new projects to come forward, the idea being that, rather than the Government or, indeed, the bill payer paying for interconnection, the private sector delivers it with some certainty of a cap and a floor price that it can achieve. Outside those parameters the consumer wins or loses, but within those parameters there is some risk-taking by the private sector. That certainly has brought forward new supply. We believe that it will continue to do so.

**Viscount Hanworth:** If we are talking about connecting the UK to the rest of Europe, we are talking about a massive engineering project. Might there not be some doubt that the market would not be forthcoming, unless it was heavily encouraged by Government sponsorship?

**Andrea Leadsom:** As I said, we are the first EU member state to allow interconnectors to bid into the capacity market, so that is a very attractive option for interconnector projects. At the same time, we work very closely with them. What we do not want to do is to end up where the Government have to sponsor and provide interconnection. We want to encourage, as far as we can—and we are doing that all the time—the private sector to come forward with these proposals.

**Tim Abraham:** It is not right to say that we do not have any interconnectors; there are a number in the pipeline. There is one with Belgium that has essentially just been completed. There is one with Norway that is now well on the way to an agreement. Denmark is another connector that is likely to happen. Iceland is being talked about a bit further down the line. There are a number of interconnectors.

**Viscount Hanworth:** You have mentioned nations, rather than private enterprises. If I can précis the Minister, will the hidden hand be able to provide what is necessary here?

**Andrea Leadsom:** We believe so. That is our expectation and our plan.

**Viscount Hanworth:** Okay.

**The Chairman:** I want to move us on to the question of regulation, which was one of the key issues when we carried out our inquiry into regional co-operation in general around the North Sea. When we looked at energy, the regulation was held up as a real barrier to a more integrated approach to North Sea energy. Lord Curry wants to ask about regulation.



**Q4 Lord Curry of Kirkharle:** Good morning, Minister. Let me declare an interest. I chair the Better Regulation Executive, which is about reducing the cost burden of regulation on business, so I have an interest in this area. The logic of having a secure source of energy within the European Union is clear, understandable and supportable. A logical extension of that principle is to look at how this is going to be governed and the role of the regulators within it. To establish a pan-European regulator is a logical thought process. However, that raises the issue of the role of the regulators within each individual member state. They will all differ and have different terms of reference and legislative responsibilities. Since the Commission has suggested that the role of ACER, the European regulator, be enhanced, does that mean that Ofgem will be subservient to the European regulator? What impact will that have on its statutory powers? Will it have to surrender some of those powers to a European regulator that will oversee the whole market? This is a huge issue in terms of how we deliver energy across the European Union under a single regulatory regime.

**Andrea Leadson:** I welcome the fact that you chair the Better Regulation Executive. That is wonderful. Philosophically, I am completely with you. We want to see deregulation, not more regulation, to facilitate better co-operation. In the North Sea, as you will be aware, we have done a huge amount to try to improve and consolidate the regulation there. We are open to considering an enhancement of ACER's role. The key thing is that we do not want to see any attempt to undermine the role of national regulators—we would completely resist it. It is essential that any increase in the role of ACER should remain subject to the approval of its board, which consists of all 28 member states, to ensure that it does not have a scope creep. We do not want to end up with duplication of regulation, in which you end up trying to meet the demands of two different regulators, one national and one European. At the same time, we want there to be a deregulatory, facilitative process.

An example of where it might be more efficient for ACER to take decisions is EU network codes, where at the moment decisions have to be taken by all national regulators. It might be charged with overseeing the functions of the European system operator bodies, ENTSO-E and ENTSOG, which play a key role in the development of the internal energy market but are not regulated at EU level. For example, as we move further towards an integrated EU energy market where there is more interconnection, it may well make sense, just for speed and ease of implementation, to have some of the cross-border issues dealt with by the EU regulator, but not to undermine or duplicate the role of national regulators. That is where we feel the balance should be.

**Lord Curry of Kirkharle:** The balance of getting that right will be hugely important. The evidence to date of creating harmonised regulatory regimes—I am not sure whether that is the plan here—is that they always rise within Europe to the highest level. We do not reduce the burden; we tend to increase it. There is the risk of significant additional bureaucracy being attached to this and adding significant additional burden to our own energy generators. Watching that space will be critically important.

**Andrea Leadsom:** I completely agree with you there. As I said at the start, I am a big fan of deregulation. In a sense, this is slightly back to front, but any enhancement of ACER's role needs to be to reduce the amount of regulation that is going around the 28 member states, as opposed to increasing or duplicating it. I see ACER's job as being to facilitate ease of regulation, communication and so on, as opposed to adding to it. I completely share your concern and suspicion that any new regulatory thing at EU level tends to increase rather than reduce the burden of bureaucracy. We would be aware of that and keen to ensure that we did not inadvertently allow additional regulatory burden.

**Lord Boswell of Aynho:** I have enjoyed very much the presentation that I have heard so far. Can I pursue the thought that Lord Curry has started in relation to the Better Regulation Task Force? As you know, First Vice-President Timmermans, who is a big hitter within the Commission, is charged with the business of simplifying that. Is it not very important for you and your officials to make sure that you are keeping closely in touch with that side of it, as well as with the energy directorate itself?

**Andrea Leadsom:** Yes. Good morning, my Lord. That is an extremely good point to make. I can assure the Committee that my department is closely in touch with Mr Timmermans. We have been in contact on a number of issues where we are concerned about encroaching regulation, not necessarily directly from the regulator but with regard to certain things—a proposed hydrocarbons BREF, for example. We are very alert to the need for improved and easier regulation—not an increased burden. I completely assure the Committee that we will be very alert to any risk of that happening here.

**The Chairman:** That is very helpful. I move us on now to capacity mechanisms, to which you have already referred.

**Q5 Lord Selkirk of Douglas:** Will the Minister accept that, although capacity mechanisms are designed to ensure security of supply, inevitably they will have a role to play in EU energy policy? Following from that, will the development of governance be in potential

conflict with capacity mechanisms or not? Can governance and capacity mechanisms exist in harmony and act in co-operation?

**Andrea Leadsom:** That is a very key question for the whole EU. I agree with you that over time, particularly as renewables play a bigger part in pan-European energy and power generation, capacity mechanisms are likely to become a more obvious necessity for all EU member states. Of course, in the UK we are to a certain extent ahead of the game, because we have had one round of our capacity auctions. As I mentioned earlier, we have also agreed that interconnectors can bid into the capacity auctions. We are actually doing rather well. We had some very high hurdles to meet to get through all of the EU state aid processes and agreements, which we have managed to achieve. While we recognise that some EU member states are already setting up their own capacity mechanisms and others will need to do so in the fullness of time, we think that there is not a one-size-fits-all approach. Each member state should be allowed and encouraged to come up with its own methodology, but each should be subject to the same high burdens of evidence that the UK's capacity mechanism is subjected to, from a principles point of view.

**Lord Selkirk of Douglas:** Can I follow up with a question that, to a large extent, you have already answered? Should foreign energy suppliers be allowed to enter the UK capacity mechanism arrangements?

**Andrea Leadsom:** We think in principle yes. We are already allowing interconnection in. I know that other EU member states would like to do the same. I do not see any ideological or, indeed, energy security reason why we should not continue to allow foreign energy providers into our capacity auction. For example, as you will be very much aware, in the gas market we import 40% of our gas needs. Obviously we take careful note of where we are importing it from, but nevertheless we do not have the philosophical view that any energy not produced at home is bad or insecure energy. It is a balance in all things. What we need to look at is the right balance of different sources and how reliable they will be. In terms of the capacity mechanism, that gives us the certainty that we need. In answer to your question, yes, we think that foreign energy providers can take part in that.

**The Chairman:** That is very helpful. Thank you.

**Q6 Lord Krebs:** I should declare an interest, as a member of the Committee on Climate Change and the chair of the Adaptation Sub-Committee of the CCC. I would like to pick up the theme, Minister, of renewable energy targets, but to place that within the broader target of the EU to reduce greenhouse gas emissions by at least 40% by 2030 compared with 1990

levels. Within that, at least 27% of the mix should be from renewables. I wondered how you see that fitting into the UK's national targets. The Committee on Climate Change sets its path in the form of advice to you on the carbon budgets. We are about to produce advice on the fifth carbon budget. I wondered whether you see a conflict between what the EU is setting and what you are setting nationally, both for the overall target of 40% and for the particular mix of 27% renewables.

**Andrea Leadsom:** We are committed to meeting our legally binding emissions reduction targets. Those are the ones that are enshrined in UK law. Of course, the difficulty with the EU 27% reduction target is that it is set at EU level. We would strongly resist any attempt effectively to allocate that out among 28 member states. My answer is that we are looking at the legally binding targets. We believe that in meeting our legally binding targets we will make our fair contribution to the 27% EU target, but we do not want that 27% target to be divvied up and to become a hard target for individual member states. Does that answer your question?

**Lord Krebs:** I think that it does. Could I follow up with a couple of supplementaries? How do you think that the governance mechanism that the EU proposes will assist in developing progress towards the targets?

**Andrea Leadsom:** The major theme of the governance process is to encourage voluntary regional co-operation. Together with the increasing cross-border energy flows as part of the single market, that should help member states to work together to develop cost-effective ways of meeting both national and EU targets. The ETS and trading will remain a cornerstone for limiting emissions in the power and large industrial sectors. All of that will be underpinned by the use of indicators. As I understand it, the Commission will produce some indicators for all member states to inform and report back to it on how they as individual member states are doing. I think that we are in a good position. We are confident that we are on the right path and remain completely committed to it.

**Lord Krebs:** In relation to enforcement, we will have this report of indicators, but what mechanism will be in place to ensure that the target is met?

**Andrea Leadsom:** The Commission will report back on a traffic-light system and will deal with individual member states to feed back to them how well the Commission feels they are doing towards this EU-level 27%, but it will be for individual member states to determine how they reach that. As I said, we would resist anything more prescriptive around what the member states should be doing to achieve that goal.

**Lord Krebs:** I will ask one final question, which is about the policy environment. We have heard in the press concerns about the lack of policy certainty affecting investment in renewables. I wondered what your views about that are. As we move through into the 2020s, when many of the current policies begin to run out, do you envisage your department having a clear direction of the policy through the 2020s to ensure continued investment in renewables?

**Andrea Leadsom:** Yes. The department and I are determined to provide investable certainty to businesses. You are exactly right. There has been a lot of publicity about the need to protect consumer and business bills by calling a halt to some of the policies that were at risk of overdeploying—and, indeed, in some areas have already significantly overdeployed—against what was expected. In a sense, you could say that some of the renewable energy subsidies have been victims of their own success. They have significantly overdeployed. We have either met or exceeded already certain targets that we had for 2020. As a result, we have significantly overspent, potentially, against the budget, which is picked up by all of us as energy consumers and by the businesses that are also big consumers of energy in the UK. We had to take steps to protect bill payers. That has resulted, in a lot of cross businesses and investors, completely understandably. We are trying to get to a new policy that gives a clear view of the future, so that businesses can have some certainty. That will include announcements on the LCF beyond 2020 and on the future for the CfD.

**The Chairman:** Before we move on from this, the Government have signed up to an overall package that sets this renewables target at EU level. You have just explained that the Government hold to themselves the right to set their own mix. I wonder what sort of moral obligation, almost, you feel if the Commission reports that the UK is way under 27. Do you think that it is acceptable that we should be under and expect other states to pick up the slack that we have not made? What is the prevailing feeling in the Government on that?

**Andrea Leadsom:** The answer is that we all started from different positions. Some EU member states started from a position where they were already generating 50% of their energy from hydroelectricity or other renewable technologies, so they started with a huge advantage. We started from well behind the curve and are doing incredibly well in rapidly expanding. I was speaking yesterday about the fact that in the last Parliament our renewables generation trebled, which is fantastic news at any level. We will take seriously, as we always do, any targets, but that is exactly why we do not want this 27% to be somehow divvied up among member states, either in terms of the type of generation or of the absolute target for

any member state. We believe that our legally binding targets will give us sufficient impetus to deliver or, indeed, exceed our fair share. Then you are going to ask me, “What is our fair share?”. We do not really want to get into that. We are committed to meeting our own legally binding commitments. That is what we want to focus on.

**The Chairman:** Thank you. You have saved me asking.

**Lord Trees:** I would like to follow up on that. Good morning, Minister. There is a target of 27% for renewables and a target of 40% for emissions. Unfortunately, some renewables produce emissions. How will the governance mechanisms resolve that sort of conflict? How will they manage the balance—that we do not push too far with renewables and make the emissions situation worse?

**Andrea Leadsom:** Going back to this 27%, we are very clearly focused on our legally binding commitments for emissions reduction. Very importantly with the 27%, we do not necessarily want to see this as all about power generation from renewables. What we are seeking to do in the world is to reduce carbon emissions, which, as we know, can be done by moving from unabated coal to gas and by moving to nuclear, for example, not just by generating power from renewables. There is also a big win to be had from better insulation, more fuel efficiency and focusing on the demand side. We do not believe that a hard-and-fast focus on what you are generating and from which particular technologies is helpful. Individual member states should be focused on their own emissions reductions and should be given the flexibility to decide how they do that.

**Q7 Viscount Ullswater:** Minister, good morning. I want to ask about national energy and climate plans. If it is part of EU governance that the production of those plans should be undertaken and if they are to be the basis for a strengthened governance, who in your opinion should be responsible for the assessment, review and enforcement of the plans? Would you consider an independent European energy and climate observatory, somewhat similar to the Committee on Climate Change in the UK, or do you think that it ought to be left to the Commission?

**Andrea Leadsom:** You are referring to a proposal from, I believe, a European think tank for an independent European energy and climate observatory, as an additional body. I would always question additional bodies. To the earlier point about regulation, that is another budget that has to be divvied up. Someone has to pay for it, it is a lot more staff, they come up with their own rules, then the Commission comes up with its rules, there is potentially a clash and someone has to resolve those issues. I always think that, ideally, we do better to

work with what we have. The core theme running through my evidence is that member states should be given every bit of leeway to determine their own energy mix and their own way of meeting their legally binding targets. That should not be either second-guessed or presided over by some kind of supra-EU authority telling them what to do. Principles-based looking at, feeding back and urging on are absolutely fine. The Commission already does a good job of that. I would need to be persuaded of the advantages—and it would be a big persuasion—to suggest that there should be another body with some kind of governance role.

**Viscount Ullswater:** Although you said that you did not want the EU to be prescriptive, when it can see that national plans are not consistent with one another, should it have a role for comment on that?

**Andrea Leadsom:** Absolutely—for comment. I certainly think so. For example, at the moment we are subject to a state aid challenge on Hinkley C from one of our EU member state friends. There are many people who feel that that is more a challenge to our choice of energy mix than it is a challenge to the EU state aid proposals. I feel that it is very important that individual member states continue to have the ability to decide their own energy mix. Comment is fine, but having some sort of governance role that tells you, “You cannot do that. You have to do it this way”, is not helpful in meeting the goal that we are all seeking, which is a reduction in carbon emissions.

**The Chairman:** The sense that I got from our seminar last week was that the thinking behind the role of the observatory was simply to ensure that there is consistency between the national plans of every member state. At the risk of opening old wounds, it was exactly because member states made their own assessments of their economic situation in the run-up to the creation of the single currency that we ended up where we did with Greece. I do not mean to overdramatise it, but there was that sense of how you make sure that the national plans are all being created and assessed in exactly the same way.

**Andrea Leadsom:** In answer to that, Madam Chairman, I would simply say that comment is great and assessment is great, but enforcement is a wholly different matter. It is entirely appropriate to have independent scrutiny. As we know, there are some very good European think tanks that will provide that level of scrutiny themselves. It is a different ball game when you come down to saying, “Because you have not done this, which they have, you must now change your policy”. That is a very different issue. It gets into the area I have dealt with of

more regulation and more burdens on member states, which are not necessarily in the interests of that particular member state's energy mix.

**The Chairman:** That is a very helpful distinction. Thank you. Lady Wilcox has the penultimate set of questions.

**Q8 Baroness Wilcox:** Good morning, both. Affordability is the key objective of the European energy policy, it says here. Would you agree with me that affordability is a key objective of the European energy policy, but reliability of supply—keeping the lights on—should in my book be equally important?

**Andrea Leadsom:** Yes. We always talk about our energy trilemma, which is keeping the bills down, keeping the lights on and decarbonising. Of all those, keeping the lights on is the one that we do day in, day out, every minute of every day, in an environment where we need to balance keeping the bills down and decarbonisation. In the big picture sense, of course, decarbonisation is a top goal, but keeping the bills down is incredibly important for consumers. As we have seen only recently with the steel industry, which has cited energy costs as one of the reasons for its problems, it is a very real consideration. Bills for consumers and businesses must always be a vital part of our consideration.

**Baroness Wilcox:** I will follow that with a question that I think is relevant for consumers. How will you involve consumers in any discussions that may take place when future principles of EU energy governance are being negotiated? As yet, we have not had any mention of the consumer being involved in anything. My background is that I ran the National Consumer Council for a while. It always seemed that, if the consumer or their representatives were brought in too late, they were not talking in the same language and already felt that it was not going to work. It seems to me very short-sighted not to have had a consumer voice somewhere along the line in with this. Could you give me a view on how you see the consumer input?

**Andrea Leadsom:** I completely agree with you. Consumer voices are absolutely vital. I am sorry to say that all too often people bandy it around that “It is only three quid on your bill” or “It is only five quid on your bill”. That might not sound very much, but for some people it is 10% of their weekly income. Consumer voices are vital. Tim may be able to add to this, but I would say that we always include consumer stakeholders in all of our consultations. For example, Which?, Citizens Advice and other consumer voices are always included. Tim, could you add to that?



**Tim Abraham:** Consumers will be quite a big focus of the work that the Commission is now doing on energy markets and its market reform. Indeed, Ministers will be discussing the consumer angle of market design at the next Energy Council. I think that you will find that consumers, the effect on consumers, the potential for smart ways of helping consumers and so on will be an important plank in the energy union.

**Lord Boswell of Aynho:** This is a follow-up to something that I have been mulling over in my mind in the previous exchanges. If one is talking about energy union, it has analogies, although not precise ones, with economic union and banking union, for example, on the financial side. A good deal of attention, including the fact that the United Kingdom is not a member of the fiscal compact but is consulted on matters, goes towards parliamentary governance of that. If it is only a matter of peer pressure and peer review—“How did you manage that? How is it that you are falling behind?”—there may be a case for some kind of parliamentary involvement as well. I do not want to create meetings for no purpose, but have you done any thinking on that as part of the process of making the whole energy union more accountable and user-friendly to member states?

**Andrea Leadsom:** The first thing I should say is that I miss our daily penpal experience. When I was City Minister, Lord Boswell and I wrote to each other, sometimes several times a day, on matters of European financial services, so I know what he means about the fiscal compact. In answer to that question, we have a very active energy and climate change scrutiny committee in the Commons. I know that you are also very active. In truth, we look to them to hold us to account, which they do very successfully. We have had some very feisty encounters already and look forward to many more. There certainly could be another parliamentary angle, certainly from the consumer point of view. That is something worth thinking about, but it is really the scrutiny committee—

**Tim Abraham:** Indeed. I do not know whether you were thinking national parliaments or the European Parliament.

**Lord Boswell of Aynho:** I was thinking international, for the record.

**Tim Abraham:** A lot of this is not a legislative proposal and therefore there is not a natural place for the European Parliament. However, it is up to them. They may well decide to come forward with own-initiative reports in this area. It would not surprise me if they did.

**Q9 The Chairman:** Very good. In the final set of questions, I want to turn to the Energy Council that is coming up in six weeks or so. It is fair to say that in recent years the activities of Mr Putin have really focused the minds of the Council on energy union and its potential

benefits in terms of energy security. Could you tell us what your expectations are from the Council in December?

**Andrea Leadsom:** Yes. Whips permitting, I shall attend the Energy Council in a few weeks' time. Our focus for that, which we hope will be accepted and adopted at the EU Council in December, is around the governance idea. We anticipate that the Energy Council will ask for the Commission to develop more detailed policies on governance, to be presented to member states at the Energy Council the following year. Those would include our key ask that governance should be around comment and assessment, but not straying into being prescriptive about member states' mix of energy policies and so on. We have some draft conclusions, prepared by officials, which will be subject to ministerial scrutiny across EU member states. The next Energy Council in three weeks' time, I think, will then inform the European Council. Obviously we hope that the European Council will take the recommendations from the Energy Council.

**The Chairman:** Are there any areas in which you can foresee that the only answer is a legislative approach, or do you think that a framework for governance could deal with all of the issues that have been raised?

**Andrea Leadsom:** My instinctive answer to that is that I would always prefer a framework. However, as I said in my opening remarks, I believe that voluntary regional co-operation, sharing of best practice and looking at ways to improve the single energy market are vital and that it is incumbent on different member states to look at those with their neighbours. A framework that encourages regional co-operation in ideas as well as implementation is a very good idea. Beyond that, I would always resist legislation, unless a very strong case was put for it.

**The Chairman:** In that mindset, who are the key allies? Which are the other member states that see the world in the same way as the UK Government? Are you prepared to say which countries want a stricter legislative approach?

**Andrea Leadsom:** It varies from country to country, depending on the particular area you are looking at. Some countries would like to see their energy mix preferences enforced more strictly across the whole EU. Others are rather resistant to making progress that might be deemed expensive towards meeting the energy goals of the EU. You have some wanting to press further and faster, others wanting to hold back, and others wanting to choose the energy mix and have it enforced across the whole EU. I would not like to pick out individuals, because we have different interests that we pursue with different member

states. There are no bad guys or good guys. We work very closely with every member state on the interests that we have in common.

I would like to add one sentence to your question about legislation. In the UK, we believe that there is a role for legislation where it streamlines regulation. Potentially there are some better regulation proposals that would reduce the burden of regulation. We would welcome that, of course. I did not want to say that I am totally allergic to legislation. It is really the focus that we want to have on deregulating, reducing the burden and making more of the effort of business go towards generating energy at lowest cost, rather than meeting these hurdles that are put in its way. Any legislation that simplifies would be a good thing.

**The Chairman:** I was not suggesting that there are good guys and bad guys. What I was getting at was your optimism about the likelihood of getting enough support around this kind of approach to the governance of the union, as opposed to a more prescriptive one.

**Andrea Leadsom:** I would say that we are quite hopeful. We do not really see a theme of other member states being determined to have a prescriptive approach. Generally speaking, with the caveats that I have mentioned, there is a sense that nobody wants to see a legislative governance route.

**Lord Curry of Kirkharle:** I have a very quick comment, following up on Lord Boswell's comment about Timmermans. We are very keen to go further—to encourage our regulators to look not just at how they can reduce regulatory burdens but at how they can contribute towards economic growth. We are introducing measures, with the Enterprise Bill that is currently going through the House, that will bring regulators into scope. I would not want that to be undermined by changes through this process. We need to build on the relationship with Timmermans and to encourage them to go further and endorse some of the policies we have been lobbying for very hard in Brussels.

**Andrea Leadsom:** Thank you. That is a really good point. It is something we will certainly take away and focus on.

**The Chairman:** Are there any other questions? We have just a few minutes.

**Q10 Baroness Wilcox:** I am delighted to hear you say the word “enforcement”. Having traded a lot in the European Union myself, I find it very difficult sometimes to work with another country where we are enforcing and they are not. It can be extremely difficult. I do not know how we are going to get round this, unless we convert them all to common law. Can you see any other way that we can get, for example, the fisheries quota to be the quota that it is supposed to be when we cannot report another country and can only look after

our own? Is there any chance that we can get double enforcement, one country to another—choose your partner or something? I find it really difficult to get to grips with how we try to get some of the countries to understand that it is no good having laws if we do not enforce them.

**Andrea Leadsom:** Obviously that is much broader than energy policy. I know that a key part of the renegotiation prior to an EU referendum is focused on enforcement of the single market, in the interests of all member states. I think that the Commission and other EU member states are very much up for that, plus a new focus on competition and deregulation. We are moving in a good direction. The mood music is very positive.

**The Chairman:** I saw Lord Cunningham first. We will then see how we are doing, because we are running out of time.

**Lord Cunningham of Felling:** Chairman, it is a simple request. Can the department please provide us with a note explaining how dependent we are on energy imports at the present time and what your forecasts are for the future, broken down into the individual elements of coal, oil, gas and interconnectors, so that we can get a good information base on that before we come to any conclusions?

**Andrea Leadsom:** Yes. We will do that—delighted.

**The Chairman:** You are in luck, Viscount Hanworth.

**Viscount Hanworth:** I do not know whether this is a legitimate question, but is the Energy Council not highly fractious, as I have heard? If so, does that not justify the establishment of an independent observatory?

**Andrea Leadsom:** I am a huge fan of elected Members of Parliament, if that is not a contentious thing to say in this room, so I think that fractious can be good. It can be very healthy to have some lively debate. I certainly do not think that the fact there is lively debate means that you should have something that is conciliatory, where all agree, imposing things. I have not been to the Energy Council before; this will be my first visit to it. Perhaps I will report back afterwards.

**The Chairman:** We will look forward to that. We hope—it is certainly the intention—that the piece of work we are currently engaged in will be of assistance to you as you think about how this governance framework might operate and look.

Thank you very much, both of you—particularly you, Minister—for answering so fully but concisely. We appreciate it and look forward to seeing you again.

**Andrea Leadsom:** Thank you very much for having me.

## University of Exeter Energy Policy Group—Written Evidence

### The Direction of Energy Systems

Global energy systems are decentralising. This is because of falling renewable electricity prices; new energy system operation and management techniques, enabled by ICT; social preferences; and supportive governance. Some countries are not following this trend but overall there is a clear global move in this direction (eg Africa Progress Panel, 2015; BNEF, 2015; Brazil, 2015; RAP, 2015a, b, c and d; EPA, 2015; EU, 2015; BMWI, 2015)

Change is rapid within electricity systems, and this is causing uncertainty for conventional investors, whilst also opening up opportunities for new entrants and new investors (Mitchell et al, 2014).

Certain countries have moved down this path more than others – and two particularly well known examples are Denmark and Germany (Agora, 2015a, b and c; BMWi, 2015). These countries have enabled learning-by-doing in how to operate energy systems with high proportions of renewable electricity. The importance of energy system flexibility capabilities has become clear – not just because it is necessary to increase flexibility with high levels of renewables but also because it enables a more energy efficient operation – which should be supported by any country (Mitchell, 2015a). In this instance, flexibility is taken to be demand side response, interconnectors, storage (of all sorts), and flexible generation.

Decentralisation is leading to new forms of energy system ownership and social innovation in practices. There has long been community energy groups throughout Europe which have undertaken local enterprises of many descriptions. Individuals may have become investors in these community energy groups or become prosumers. GB, for example, has implemented a staggering 720, 000 over the last few years (Energy Trends, Sep 2015). However, what is new is both (1) the rate of increasing numbers of people, groups or new entrant businesses or organisations involved (ie the so-called Core Cities in GB); and (2), in part because of that, moves towards local energy markets (which effectively net off supply and demand and are nested within other markets, for the benefit of increased energy efficiency) which allow the energy economy to remain local and which is therefore a physical economic embodiment of the decentralising trend (LEMMA, 2015). Germany is also endeavouring to decentralise ownership of networks (eg Buerger Berlin) and the NY REV is endeavouring to add in a new value proposition to distribution networks to turn them into the market facilitating heart of energy systems.

This combination of these two factors has been called the democratisation of energy, and is part of a growing social, global movement, in part enabled through the combination of falling prices and the scale of technologies and driven by a broad spectrum of social concerns (eg Vatican, 2015; Islamic Declaration, 2015) whether it be inequality, poverty, environment – as well as financial concerns, such as the carbon bubble (eg CTI, 2014).

The EU has already gone some way towards this with their Market Design Consultation and their R&D plan for energy (EU, 2015; SET Plan, 2015). Both see renewables and energy efficiency as the centre of future energy. The recent SET Plan conference stated again and again that it is governance that is undermining EU energy development rather than technologies per se, although obviously technology development is still needed.

Governance therefore needs to ensure (1) a flexible EU-wide energy system; (2) enable, rather than stifle, the growing social momentum within energy, bringing local, national and EU regional together via appropriate network and market designs; (3) be able to keep up with the rapid change (social and technological) that is happening around the EU (and world); and (4) ensure security and affordability of energy systems.

## **EU Energy Governance**

If one takes governance to mean institutions and the rules of the game (ie market rules, network access rules, direct policies (ie for renewables and energy efficiency)), then broadly the EU needs to sort out its transmission and interconnector rules, and to ensure market design which supports variable power and heat and flexibility capabilities but also enables local involvement. The following areas need to be thought about:

### *Standardisation*

The SET plan conference speakers and attendees made clear how important it is that standardisation of certain aspects of the EU energy system needs to occur. This is primarily the technical aspects of energy – how connections occur, building regulations etc so that companies find it easy to sell their equipment across Europe – and for regional transmission, whether electricity or (renewable) gas/heat.

This was not standardisation of direct policies for renewables or energy efficiency per se – although the EU clearly would like that. My own view is that the politics of energy is such that certain countries are able to bring a EU wide policy down to the lowest common denominator, undermining the better policies. A pragmatic response to that is to enable countries to implement the policies they wish, provided they reach a minimal level.

However, with respect to the technical aspects of running an energy system it seems to me that standardisation is necessary.

### *Ensuring Flexibility*

The EU needs to be integrated via interconnectors. Some countries are doing very well with this respect and others less so. One question is how should this be led in the EU? The US has a Federal Energy Regulatory Commission (FERC, 2015) which is responsible for federal transmission in the US. It seems to be that a EU equivalent may make a lot of sense, and should be investigated. The US States are still able to have their own regulators but the transmission, and hence flexibility and security, across the US is FERC's responsibility.

Other flexibility capabilities such as storage, demand side and sufficient flexible generation needs to be adequately valued via market design so that integration of markets and networks occur, from the local through to regional, and is discussed below.

### *Market Design*

Current electricity markets tend to have rules which suit fossil fuels and nuclear power. As high penetration of renewables occurs, these rules both displace fossil fuels and bring down peak prices (which is good for consumers). However, for both fossil fuels and renewables, there are difficulties under the current market design in covering costs. The EU has put out a consultation document (EU, 2015) on this and it is important that new market designs are

established which essentially fit renewable characteristics, bring in the demand side, value flexibility capabilities. There are various suggestions of this but at root the key is designing the market for a variable power electricity system and one where supply and demand is equal – meaning that the sale of a unit of energy NOT used is assessed equally to sale of a unit of supply.

Local energy markets are also a new but vital part of any future energy system. They enable local supply and demand balancing to occur – hence the development a very energy efficient system – via new ICT. Only net supply or demand goes ‘up’ to the next level of market balancing. For most countries in Europe, this needs significant governance restructuring but some countries are already there. Moreover, NY State is investigating distribution networks as market facilitators and this may be a sensible way forward (Mitchell, 2015b).

### *Capacity Mechanisms*

A capacity mechanism is a development which has occurred parallel to increasing amounts of variable power renewables and policies which support the displacement of fossil fuels in favour of renewables. There have been arguments that there will be insufficient capacity to maintain security. This always need to be carefully questioned since, at root, the point of sustainable energy policies is to displace fossil fuels so it is illogical to then support them via another mechanism if there is no real security concern (Keay- Bright, 20014). There are very many types of capacity mechanisms (Mitchell, 2014, Lockwood, 2014) – some better than others. What is necessary is that payment for capacity is only given when that capacity is needed, and that capacity is understood to be NOT only electricity generation but also other flexibility capabilities, such as demand side response, interconnectors, storage and so on. My preference along with demand side being within the main market mechanism is for a targeted reserve which enables a SO to ask for a certain capacity – of whatever capability and amount for whatever number of years they judge best. This is at minimal cost to customers and the most flexible mechanism.

### *Renewable energy policies*

The successful and rapid development of renewable energy comes down to many enabling dimensions and all these dimensions need appropriate governance to ensure its success. Firstly, is the mechanism itself – and my preference is a classic German FIT which has been shown to be the cheapest and most risk free way to get renewable development. This includes priority dispatch and clear network access costs. It also needs market design, as discussed above; the ability to have local tariffs; local authorities and coops as suppliers; competitive retail and so on.

### *Energy efficiency first*

The EU needs to prioritise the demand side. Total energy use needs to come and the efficiency of how we use energy needs to increase via product and building regulations etc. Targeting the demand side needs an energy restructuring.

### *The Importance of people and social capital*

There is no doubt that Britain, and Europe, could technically transform to a renewable and energy efficient energy system – with appropriate interconnection etc. But individuals and consumers have to be part of this. For many people, their interaction with energy is

incidental. Energy policies have to impact beneficially and easily on their everyday lives. So transforming a society to one which is sustainable is as much about developing social capital through strengthening local and community links as it is about direct energy policies, such as good public transport policies, local schools, hospitals, care homes and so on.

## **Answering the Specific Questions**

### **Importance of EU Energy Governance Restructuring**

It is vital for the EU to restructure its governance. So far, given the EU's market design document, it appears that it is very well to engage with this topic. As so much however with energy – the success or not of a policy comes down to the detail of design. Governance design for flexibility, markets, renewables and energy efficiency must keep this in mind. 'Fudging' tends to be the worst of all worlds.

### **National Plans and Climate Plans**

These are all important. Some countries have so many supportive policies, that targets are a small part of the trajectory but for most countries targets are vital so that it is clear to investors where the energy system of that country is going. To implement a coherent strategy, it is important to know where the end goal is. Preferably climate and energy policies are taken out of party politics so that carbon budgets have to be met.

### **Regional cooperation**

It is clear that from a regional perspective there are EU governance aspects which are regional – ie transmission and interconnection. However, all countries need to take responsibility for their GHG reductions. Moreover, as said in the introduction, energy is decentralising and becoming local because of new technologies. Enabling local energy is a central part of meeting EU legal requirements. So – yes regional cooperation is important – but in fact, the local is becoming increasingly important as well.

### **New Legal Governance Frameworks**

The EU Governance restructuring will require legal frameworks – not just at the regional level but also on the domestic member state level.

## **Conclusion**

We welcome this Lords Inquiry. We think it is very timely, given the huge amount of change that is happening to energy both within Europe and the globe. If Europe (and GB) is to remain part of the global energy economy it has to change its governance so that its markets act as a springboard for its technologies (Matthews and Han, 2014).

Current governance is based on fossil fuels and nuclear and is unsuitable for an efficient, flexible, renewable energy based system.

A flexible energy system is the most efficient way to operate a system anyway, and should be seen as a no-regrets energy policy for all Member States.



The EU is in a good place to both stimulate regional governance change along with local governance change to best meet social preferences and energy policy goals of environmental concerns, security and affordability.

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## **Vattenfall—Written Evidence**

Before answering the specific questions, we would like to share our general recommendations for a European Governance System.

### **Take on a European mindset**

As the Member States of the European Union have agreed to address the CO<sub>2</sub>, renewables and energy efficiency targets on a European level, the governance system should be designed to foster such a development. A well designed and well implemented governance system that leads to enhanced regional and European coherence and cooperation could foster a cost effective achievement of the EU climate and energy targets.

### **A simple but effective governance system to reach targets and promote investment climate**

The governance mechanism should focus on the enablers of an energy transition:

- Further market integration;
- Better functioning of the markets;
- Sustained role of the EU ETS as key driver;
- Grid development;
- Harmonized rules for renewables support;
- Enhanced requirements for regional cooperation.

### **Member States should:**

- Outline the tools intended to be used to fulfil national contributions towards the EU 2030 targets and justification why these are needed on top of the EU ETS;
- Highlight their plans for interconnections and infrastructure development;
- Assess how the national plans for RES could impact neighbouring countries and remedies to solve those.

### **The European Commission should:**

- Support this development by continuing the work for market integration and harmonized market rules in order to ensure a level playing field;
- Allocate EU funds to infrastructure as well as innovative new technologies (as for example wind offshore).
- Key indicators could be used to follow up on this development.

### **Case Study One (national energy security): Capacity Mechanisms**

*How might the development of some form of governance system mitigate any impact of separate national capacity mechanisms on the EU's energy policy?*

Vattenfall considers that the long run adequacy and security of supply in the electricity market is best ensured by exposing all actors to true market prices. Freely moving prices allow the market to restore the supply and demand balance and to send investment and divestment signals (i.e. it must be up to the market to decommission unprofitable plants). Vattenfall believes that with market improvements and increased interconnection, in combination with enforced rules to trade up to the physical capacity of the existing grid, challenges related to increasing variable generation and the transition to a low-carbon energy system can be addressed appropriately.

*How far can co-ordination of such mechanisms go before it becomes politically unacceptable?*

No comment.

*How has this tension between EU and national objectives been handled thus far?*

Vattenfall believes that both the EU and the member states have the responsibility to ensure security of supply, be it European or national. Security of electricity supply can be best ensured by functioning power markets with freely moving prices that reflect the supply and demand balance.

### **Case Study Two (national energy mix): Renewable energy targets**

*The October 2014 European Council agreed that the EU should cut its greenhouse gas emissions by at least 40% by 2030 compared to 1990 and that this should be delivered through a range of measures including renewable energy: "An EU target of at least 27% is set for the share of renewable energy consumed in the EU in 2030. This target will be binding at EU level." This contrasts to the 20% renewable target by 2020 which has binding national targets for each Member State.*

*How could a governance mechanism assist the EU to deliver its stated policy, including not only the 27% renewables target but the overarching 40% emissions reduction target which relies in part on the renewables target?*

Vattenfall believes that enhanced regional and European coherence and cooperation could foster a cost effective achievement of the EU climate and energy targets. Member states have agreed to have a European renewables target for 2030 that is not distributed on member states. Vattenfall believes in the joint effort by increasing regional cooperation.

Vattenfall supports the envisaged participation of generators of foreign installations in national tendering schemes. Cross-border participation in national support schemes needs further clarification on the "how" but ultimately will lead to more integration and harmonization of Europe's power markets. A dialogue between national policy makers, stakeholders and the European Commission would be welcomed to discuss how to facilitate such cross-border participation in a harmonized way.

## Vattenfall—Written Evidence

*How robust could a governance mechanism be without compromising Member State responsibility for their national energy mix?*

Vattenfall believes in the Member State responsibility for their national energy mix. Therefore, the governance mechanism should not address the energy mix. Instead, the governance mechanism should focus on the enablers of an energy transition:

- Further market integration;
- Better functioning of the markets;
- Sustained role of the EU ETS as key driver;
- Grid development;
- Harmonized rules for renewables support;
- Enhanced requirements for regional cooperation.

### **Drawing the case studies together: Looking forward**

*What are the implications of a strengthened EU approach to energy governance? What are the implications of not making swift progress towards a new – and clear – governance system?*

Vattenfall believes that a well designed and well implemented governance system that leads to enhanced regional and European coherence and cooperation, could foster a cost effective achievement of the EU climate and energy targets. Not making a swift progress.

*If National Energy and Climate Plans were to be the basis for a strengthened governance, who should be responsible for assessment, review and enforcement? How can transparency of that process be assured?*

No comment.

*What role should regional co-operation play in any new governance system?*

As we stated in our answer to question 4, Vattenfall strongly believes that an enhanced regional and European coherence and cooperation could foster a cost effective achievement of the EU climate and energy targets.

*How can regional co-operation help to overcome the potential tensions between national and EU policy objectives?*

As we stated in our answer to question 4, Vattenfall supports the envisaged participation of generators of foreign installations in national tendering schemes. This would enable member States to help each other out in achieving the overall European renewables target.

*Should a new governance framework be enshrined in legislation?*

No, the governance framework itself should not be enshrined in legislation. The proposals coming from the framework could be so.

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