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## **FOSG response to the UK Government's Review of the Balance of Competences between the United Kingdom and the European Union on Energy**

15 January 2014

### **About Friends of the Supergrid**

Friends of the Supergrid (FOSG), founded in 2008, is a European Industrial Alliance that advocates for the creation of a pan-European, integrated high-voltage direct current electricity network. The organisation represents a group of companies from across the electricity generation and transmission value chain. Members of the Friends include some of the world's leading clean energy companies, many of which have extensive UK operations, such as Siemens, ABB, Mainstream Renewable Power, DONG Energy, and National Grid. We share a common conviction that a fully integrated European electricity network is fundamental to ensuring a transition to a secure, affordable and low-carbon electricity system.

### **Executive Summary**

Friends of the Supergrid (FOSG) welcomes the possibility to comment on the energy component of the UK's Review of the Balance of Competences between the United Kingdom and the European Union. Our response will focus primarily on EU competence in the area of cross-border electricity infrastructure and the creation of a single EU energy market. Our main points are as follows:

- EU competence over energy has been critical in driving energy policy at the member state level, which have been effective in increasing the use of low-carbon energy sources, such as renewables
- Legislation to create a single European energy market and increase interconnection is best placed where it currently is, at the EU level
- EU competence could be expanded in this area to hasten the development of physical interconnection projects, as electricity flows between many member states are still minimal
- Further integration of European energy markets is desirable for the UK and all member states as it will help deliver more secure, affordable and low-carbon sources of energy
  - It will also allow the UK to exploit more of its own renewable energy sources of energy, which it can consume domestically or export to Continental Europe

## Consultation Questions

### GENERAL

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

FOSG represents a range of companies that supply equipment, services and solutions for a pan-European, HVDC electricity transmission grid. Given our perspective, FOSG believes EU actions to develop a single energy market have been beneficial for its members and for member states' efforts to provide affordable, secure and low-carbon energy to consumers, including the UK.

Specific EU-level policies, including the Energy Strategy, with its triple target of 20% carbon emissions reductions, 20% renewable energy and 20% increases in energy efficiency by 2020, have heavily influenced subsequent energy policy at the EU and Member State level alike. EU regulations, particularly the TEN-E infrastructure regulations in the Third Energy Package to develop a pan-European electricity grid, and funding programmes, such as the Connecting Europe Facility, were created with these targets in mind. They are also essential in laying the foundation for the European Supergrid. Additionally, the Renewable Energy Directive of 2009 set a 2020 target requiring 20% of energy to come from renewable energy sources. Although Member States determine their own individual targets depending on the existing level of renewable energy capacity installed, the Directive has played an unmistakable role in driving renewable energy development across Europe. These policies and regulations have resulted in increasing levels of renewable energy capacity and should soon bring forward a number of cross-border electricity interconnectors, which benefits those in the clean energy generation and electricity transmission infrastructure sector.

- Do you think that the EU has introduced legislation that is proportionate / disproportionate to the issue it aims to address?

With respect to creating a single energy market in Europe and linking up all Member States through physical electricity interconnectors, we believe EU action has been proportionate. For obvious reasons, these policy goals are best served by legislation and coordination at the EU level, as opposed to a more piece-meal approach laid out by individual member states. We applaud the EU's existing efforts to achieve these goals through new TEN-E regulations that support cross-border electricity interconnection projects – Projects of Common Interest (PCIs). Regulations require Member States to expedite permitting and planning approval for these projects (the final list of eligible projects was published in autumn 2013). The Connecting Europe Facility (CEF) and the Horizon 2020 research and innovation funding programmes have also been created that will provide financial support for pre-commercial technology and beneficial, although not yet commercially-viable, interconnection projects.

Progress towards the creation of the single, interconnected European energy market has been disappointingly slow. There are still too many “electrical islands” – regions with isolated grid systems that are separated from Continental Europe. This holds true for island states, like the UK, but also occurs in regions that share land borders. For example, interconnected capacity between the Iberian Peninsula and France barely exceeds 1 GW. In the case of the UK, to date, there are only 4 interconnectors with 4GW transmission capacity. The European Network of Transmission Operators for Electricity (ENTSO-E) estimates that 45,300 km of new transmission lines is required for Europe to meet its

renewable energy targets alone, much of which must be cross-border, and another 18,200 km and 21,900 km for internal market integration and security of supply respectively.<sup>1</sup> An efficient, interconnected network should also include nodal connections, i.e. transmission networks that split off to connect into multiple jurisdictions, which it currently lacks. We believe the EU could reasonably take more action to hasten the development of the single market and construction of physical interconnector projects. One way it could do this, as we have proposed in previous consultations, is to set an interconnection target that would sit alongside targets for carbon emissions reductions, and renewable energy and energy efficiency if they are set for 2030. This would require member states to source certain percentages of their electricity demand with power generated in other EU countries.

## THEMATIC AREAS

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

FOSG, unsurprisingly, believes that deeper integration of EU energy markets is desirable. A single, interconnected European energy market will deliver energy more efficiently and at a lower cost. It will also help Member States achieve their 20-20-20 climate targets. For the UK specifically, which is for the most part an energy island (particularly for electricity as only 4GW of capacity is available from the existing 4 interconnectors), completion of an internal energy market has multiple benefits, as identified in a recent Cost Benefit Analysis undertaken by FOSG. It will lower energy bills for consumers by allowing the UK to buy from cheaper sources, thereby increasing competition in the market and more efficiently allocating electricity resources to areas where demand is highest. It will also enable the UK to expand renewable energy development while avoiding higher curtailment and network costs. Excess renewable energy supply that can't be used in the UK can be sent through interconnectors to where it's needed and the need for back-up power supply to balance out the variability of renewables will diminish. Excess capacity is abundant across Europe and goes wasted. Allowing it to be sent to states with capacity scarcity will reduce costs for Member States as it would reduce the need to provide domestically-based back-up capacity, through such mechanisms as the Capacity Market in the UK.

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

The EU TEN-E regulations on trans-European energy infrastructure (Regulation (EU) 347/2013), which came into force in May 2013, will benefit the UK in the coming years by expanding its access to electricity through Projects of Common Interest that link the UK to other Member States. PCIs will allow the UK to purchase electricity from other states when it is more affordable, thereby reducing energy bills for consumers and industry. It will also allow for the more efficient use and integration of renewable energy by reducing costs associated with balancing the system and providing back-up capacity in times when power demand and supply are out of synch. This will expand the scope for renewable energy generation and well as reducing its costs.

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<sup>1</sup> Energy Ireland (26 September 2013), *Developing the Super-grid*, Available at: <http://www.energyireland.ie/developing-the-super-grid/>

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

EU regulations for energy infrastructure will increase the UK's ability to exploit its abundant indigenous renewable energy resources. This is particularly true for offshore wind, which is estimated to have a total practical potential of 116GW from fixed turbines and 350GW if floating turbine technology is commercialised.<sup>2</sup> The UK is the world leader in installed offshore wind capacity and has the highest offshore wind resource potential in Europe. This energy can be fed into European grids and used wherever there is insufficient electricity supply and where the price is competitive. Current interconnection capacity is low in the UK, but eligible PCIs for the North Seas Corridor, (of which there are 20 eligible projects), if completed, could dramatically increase the UK's capacity to exploit indigenous renewable energy resources of all types.

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

There is general consensus in the area of renewable energy sector, EU targets have been instrumental in the rapid development of renewable energy capacity across the EU. The Second Renewables Directive (Directive 2009/28/EC) is credited with the growth of renewables capacity. Since 2009, when the Directive was passed, the share of renewable energy in the energy mix in Europe has grown from 9.2% to 13% in 2011.<sup>3</sup> Wind power capacity in Europe grew from in 2009, to 106GW by the end of 2012. In the UK, the Renewables Obligation stimulated a growth in operational wind power capacity from just over 4GW in 2009 to over 10.5GW by mid-2013 (onshore and offshore).<sup>4</sup>

Some argue the EU's decision to set technology-specific targets has diminished prospects for other low-carbon technologies, such as nuclear, carbon capture and storage. While we do not wish to comment on this view as an organisation, we would suggest that EU low-carbon targets could be improved in their next iteration in the 2030 Framework on energy and climate change. For example, we believe renewable energy plant have sometimes been developed inefficiently. Member States, in order to meet their national renewable energy targets, have sometimes built plant where production capacity is relatively low compared to other areas in Europe. For example, solar PV installations in Northern Europe make much less sense than solar in southern Europe. Renewable energy installations should be located where resources are strongest and then fed into HVDC grids and transmitted across Europe to demand centres. We believe that if the EU chooses to set a renewable energy target again for 2030, the target should be set at an EU-wide level, as opposed to the Member State level. Renewable energy installations will then be developed in areas where it makes the most sense and a European Supergrid will enable this new approach to take place.

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<sup>2</sup> The Offshore Valuation Group (2010). *The Offshore Valuation*. Available at: [http://offshorevaluation.org/downloads/offshore\\_valuation\\_full.pdf](http://offshorevaluation.org/downloads/offshore_valuation_full.pdf).

<sup>3</sup> European Commission (2013). *EU energy in figures, Statistical Pocketbook 2013*. Available at: [http://ec.europa.eu/energy/publications/doc/2013\\_pocketbook.pdf](http://ec.europa.eu/energy/publications/doc/2013_pocketbook.pdf)

<sup>4</sup> DECC (2013). *Renewable Energy Roadmap: 2013 Update*.