SUBMISSION BY E.ON

Introduction

E.ON is one of the UK’s leading power and gas companies – generating electricity, and retailing power and gas – and is part of the E.ON group, one of the world’s largest investor-owned power and gas companies. We employ around 12,000 people in the UK and more than 85,000 worldwide.

Through our global Climate and Renewables business we are one of the leading green generators in the UK, with sites located from Cambridgeshire to Kintyre. We have invested over €7 billion in renewables in the last five years in Europe and the US and will invest at least another €7 billion in the next five years. Our comments on this inquiry are from the perspective of this area of our business and the potential we see for investing in renewable energy in Scotland.

Our footprint in Scotland includes two onshore wind farms at Deucharan Hill (15MW) and Bowbeat (31MW), Robin Rigg (180MW), our third UK offshore wind farm located in the Solway Firth, and our first dedicated biomass power station – the award winning Steven’s Croft in Lockerbie. We are also investing around £120m in two new onshore wind farms; Rosehall near Lairg at 24 MW will begin operation in 2011, whilst Camster in Caithness at 50 MW should start producing electricity from early 2013.

In 2011, we secured consent for Corriemoillie, a 48MW onshore wind farm in the Highlands, in addition to our other consented onshore wind project, Dungavel, located in South Lanarkshire. We were also delighted that the Forestry Commission Scotland (FCS) awarded E.ON the exclusive right to explore the potential for new wind energy projects, over 5MW on two lots of land within the Scottish National Forest Estate as part of its search for development partners to maximise Scotland’s wind potential. The two lots awarded were the West and North-west of Scotland, covering West Argyll, Lochaber, Invershire, Ross, Skye and the Northern Highlands.

We were the first energy company in the UK to purchase, install and generate electricity to grid from a wave energy converter. It was generating to grid from October 2010. Our award-winning Vagr Atferd (Norse for wave power) project is currently testing the P2 Pelamis Wave Energy Converter at the European Marine Energy Centre in Orkney.

We have also been awarded two agreements for lease to develop two 50 MW wave energy projects in the Pentland Firth and Orkney Waters. These projects (subject to obtaining consents) will be phased between demonstration and commercial phases.

Are the 2020 renewables targets (for electricity and heat) achievable? If not, why not?

1. Delivering the 2020 renewables targets in Scotland poses major challenges. The target set by the Scottish Government to generate electricity from renewable sources sufficient to meet 100% of Scotland’s gross electricity consumption by 2020 is ambitious and will require a significant acceleration in the level of
investment. The extent to which it will be delivered will depend on whether barriers to investment – planning, transmission and supply chain constraints – can be overcome and sufficient incentives exist to attract the capital investment required.

2. That said, it is important not to ignore the considerable natural resources available and the potential to meet both the electricity and heat targets is significant if the hurdles above can be overcome.

Will increase in demand from electric heat and transport be offset by efficiencies elsewhere?

3. It is important to have a coherent energy policy framework which will incentivise the required investment in generation, networks and energy efficiency measures.

4. If Scotland’s 2050 target of an 80% reduction in greenhouse gas emissions is to be met, this will require significant electrification of heat and transport, as set out by the Committee on Climate Change, which will lead to increasing demand for electricity as these technologies gain market share. However, this should be partially offset by improvements in the efficiency of energy consumption, which will also help reduce the cost of energy for consumers. To deliver this target in as affordable a way as possible for the customer, it is essential that there are radical improvements in energy efficiency and continued commitment from the Scottish Government to improving levels of insulation, and a long-term focus on driving down costs in low carbon generation technologies, including the cost of renewable energy generation and the network improvements required to connect the new generation to the grid.

Is the technology to meet these targets available and affordable? If not, what needs to be done?

5. Onshore and offshore wind are two of the key renewable technologies for delivering Scotland’s 2020 targets. Onshore wind is a mature renewable technology and one of the most cost effective low carbon solutions available today. We also support the cost reduction initiative to reduce the cost of offshore wind from around £150/MWh today to £100/MWh in 2020, which will make this increasingly affordable. It is vital that we bring these costs down to put the industry on a sustainable basis and retain the confidence of customers in renewable energy. Biomass is also an important part of the low carbon mix and can provide a reliable source of low carbon electricity and heat.

6. The technology needed for generation from wave and tidal is still at a prototype testing stage and not yet commercially viable. Investment is required in technology developers to de-risk the technology and to gain experience in installation, operation and maintenance techniques and to scale up manufacturing processes to drive down the cost of each marine energy converter.
7. Due to the level of technology risk at the early stage of developments, suitable levels of both capital and revenue support will be required for demonstration scale projects (at a small scale – starting at 10MW) to make projects economically viable. After the first arrays are established and additional operation and maintenance experience is gleaned it is expected that the cost of the technology will fall.

Are electricity generating or heat producing technologies compatible with the need for security of energy supplies?

8. E.ON supports the principle of using a diverse range of technologies in order to secure the future energy needs of customers. We believe this should include a broad mix of generation technologies covering renewables, cleaner fossil fuels and new nuclear, which is broadly supported by the Committee on Climate Change.

9. A balanced energy mix is the best way of ensuring we can deliver low carbon electricity and heat, securely and at an affordable price for consumers.

What further improvements are needed to the grid infrastructure or heat supply networks both at a national and a local level? Additionally, are we confident that the necessary infrastructure can be developed and financed so that Scotland can export any excess electricity generated to the rest of the UK and/or the EU? What is the role for the Scottish Government here?

10. As a developer and operator of wind farms in Scotland, we have experienced at firsthand how inadequacies in the grid infrastructure have delayed projects being constructed. Grid upgrades both onshore and offshore are required to support increasing levels of wind generation in Scotland.

11. To achieve the 2020 renewables target, Scotland will need to be able to export substantial volumes of power to the rest of the United Kingdom during periods of high renewable output, which will require significant additional transmission investment.

12. The regulatory framework set by Ofgem needs to encourage some strategic network investment ahead of a specific project requirement for it to ensure renewable investments are undertaken in a timely manner and to minimise delays to consented projects. We are already experiencing connection dates slipping towards the end of the decade which is adding unnecessary cost and delay to our projects. The planning system also has a role to play, recognising for example the time taken to make a determination on the Beauly-Denny line and the impact of these delays and additional costs.

13. Finance is likely to be available for investing in the grid infrastructure, with interest from pension funds and other financial institutions likely to be high given the long term stable regulatory return provided by the regulatory regime for networks. This needs to be encouraged and developed.
14. In areas where there is plentiful wave and tidal resource, connection to the grid is currently not available and significant investment will be required to connect the planned wave and tidal developments across the Scottish Highlands and Islands.

15. There is a lot of development planned around the smaller islands and care will need to be taken to co-ordinate the connection of multiple projects to ensure access to grid as the number of suitable cable landfall locations is limited.

Is the planning system adequately resourced and fit for purpose?

16. Having both the quantity and quality of resources within local planning authorities and statutory consultees has been a concern for us for some time. We are concerned that this issue will be compounded by recent cost saving cuts. Whilst recognising that savings need to be made, it is important that these bodies focus scarce resources on major priorities such as renewable energy or other major infrastructure projects.

17. It is also worth considering whether organisational restructuring can lead to more effective use of the resources available. We do not support the concept of developers having to pay for planning services, and are concerned that some bodies are actively considering this as an option in the face of cuts to funding.

18. There needs to be recognition that beyond a certain threshold, an onshore generation project will increasingly be providing capacity to help contribute not just to local requirements, but also to a wider national need for new capacity especially as around 25% of GB capacity is being shut over the next decade. The section 36 process recognises this, providing a democratic process, with local stakeholders able to be involved in the debate, and the Minister ultimately responsible and accountable for making the final decision. We are not convinced that there will be sufficient resources or people with the right skills at a very local level to manage larger scale complex projects, typically above 50MW, especially at a time when local authorities right across the UK (Scotland included) are under financial pressure to make savings in their respective budgets, which will inevitably place further strain on already limited resources. We believe the current 50MW threshold onshore provides the right balance and believe that changing the threshold to 100MW could lead to considerable delays to projects, making it less likely that Scotland will be able to meet 100% of demand from renewable sources by 2020.

19. We welcomed the Marine (Scotland) Act and believe that for wave and tidal energy projects this should result in a more streamlined consenting process by having a ‘one stop shop’ for marine licensing and a reduction in the number of licenses required to develop and operate a marine renewables project.

20. However, with regards wave and tidal we are still concerned given the increasing number of renewable energy developments making applications that there may be ‘bottle necks’ experienced if insufficient resources are available and we hope that the recent policy changes improve this situation.
How can national priorities be reconciled with local interests?

21. It is important to strike the right balance and we approach every project we develop on this basis. We believe the current approach of smaller schemes below 50MW being determined at the local level, and schemes larger than this being determined by the Energy Consents Unit helps to balance these interests, implicitly recognising that 50MW and above projects have an increasing significance at the national level.

22. Undertaking good consultation and engagement is an important way in which through the design process local interests can be taken into account. Engaging with everyone who is involved with and affected by our renewable sites is a fundamental and integral part of our development process. We aim to build strong relationships with key stakeholders and forge strong community ties from an early stage of development through the implementation of a rigorous and thorough process of consultation and engagement.

Will sufficient funds be available to allow investment in both the installation and the development of relevant technologies? What can the Scottish Government do to influence this?

23. Electricity Market Reform (EMR) will play an important role in ensuring that the framework for investment in renewables is fit for purpose and that there are sufficient funds for renewable technologies in the future. The Scottish Government should be fully engaged in ensuring these proposals are designed to support the types of investment that Scotland would want to see.

24. It should be recognised that existing players do not always have the balance sheets to deliver all of the investments required in Scotland, and so new sources of investment, particularly from the financial community, will be needed. The UK Government’s proposal to support new carbon investments through a system of Feed in Tariffs in the form of long term contracts for difference, which provide a predictable, assured, revenue stream for new investments, has the potential to attract new sources of investment from financial institutions to support capital intensive renewable projects.

What will the impacts be on consumers and their bills?

25. The impact on customer bills is difficult to quantify. It depends on the “what if” counterfactual scenario, and assumptions that need to be made on the future price of gas, oil and other commodities. For example, in a high gas price world, the impact on consumers of investing in renewable technologies will clearly be lower than under a low gas price because renewable electricity will be relatively more economic than power generation from gas and coal. If, however, gas is relatively cheap renewables will be more expensive. Provided there is a continual focus on energy efficiency and reducing the cost of technologies such as offshore wind and marine, the impact on bills may be limited.
26. However, the committee should be aware that removing locational transmission charges will lead to higher bills being faced by customers in Scotland. If locational signals are removed from generation charging there is no rationale for keeping them for demand. Scottish customers pay the lowest transmission charges in Great Britain and removing locational charging will increase their charges whilst lowering them for customers in the South of England.

27. From our experience as a developer, owner and operator of renewable generation in Scotland, we do not share the view that removing locational charging is needed to support renewable investment in Scotland. E.ON supports locational differentiation of charges for generation and demand across Great Britain so that the actual costs to the transmission system of connecting either new generation or demand are reflected in the investment decision. However, locational charging does not prevent economic renewable investments - our recent investment in 75MW of new onshore wind plant in the Highlands has not been affected by locational transmission charging and reflects the fact that Scotland benefits from higher wind resources compared with much of England which is more than able to compensate for the higher transmission charges. The removal of locational charges will lead to higher returns for existing gas and coal-fired generators based in Scotland which may increase CO2 emissions in Scotland if it leads to conventional plant being kept open which otherwise would have closed.

Are the reforms of the energy markets and subsidy regimes at both UK and EU level sufficient to meet the challenge of the Scottish Government’s renewable targets?

28. We broadly support the UK’s proposed reforms of the power market but their effectiveness in promoting investment will depend on whether the incentives provided under any new regime are sufficient to attract investment and whether the cost of these incentives are acceptable and can be borne by the economy and by consumers. The latter factors are reflected in the system of financial controls on levy-related expenditure put in place by HM Treasury. In addition to these reforms which we support, it is important that regional and local constraints around planning, grid, and radar are addressed to prevent projects being delayed.

E.ON
29 February 2012