



Inveralmond House
200 Dunkeld Road
Perth
PH1 3AQ

Mrs Fay Geitona
ERGEG

Telephone: 01738 456488
Facsimile: 01738 456415
Email:
samantha.ridsdale@scottish-
southern.co.uk

Date : 18th February 2010

Dear Mrs Geitona,

Regulatory aspects of the integration of wind generation in European electricity markets

Thank you for the opportunity to respond to this consultation.

SSE is the second largest generator in the UK, with over 11.5GW of generation capacity, 2GW of which is renewable. Additionally, we are the UK's second largest energy supplier, with more than 9 million gas and electricity customers, and we have an electricity networks business which is responsible for around 127,000km of overhead lines and underground cables. We also hold a 50% stake in Scotia Gas Networks (a UK gas distribution business) and operate telecoms, contracting and gas storage businesses. We have a generation and supply operation in Ireland and are currently developing our renewable generation portfolio in Portugal, Sweden and the Netherlands.

SSE believes that wind generation is an important tool for achieving the 2020 renewables targets and, hence, positively affecting climate change. The areas in which SSE operate are some of the windiest in Europe (i.e. the UK and Ireland) and we expect a significant increase in wind generation over the next few years. In fact, for offshore wind generation alone, there are plans to connect around 30GW of capacity to the GB transmission system before 2020.

However, it must be recognised that wind farms have some differing characteristics than conventional fossil fuel plant –

- They are likely to be sited in areas which are peripheral to existing transmission networks
- They are less able to respond to locational signals due to their reliance on the availability of an “immovable” fuel source
- They are less flexible than conventional fossil fuel plant
- The output is less predictable and more intermittent than conventional fossil fuel plant

And yet, although some of these characteristics may be perceived as a challenge to widespread integration, wind generation has proved that it has the capacity to provide low-cost, clean renewable energy for millions of Europeans.


In order to support the effective integration of wind generation, we believe that the right regulatory and market frameworks are critical. These frameworks must provide -

- certainty for investment in wind generation
- non-discriminatory transmission and balancing charging structures which recognise the (usually) remote location and intermittent nature of wind generation

SSE broadly supports the Eurelectric response to this consultation. However, we would like to provide some additional views and have outlined these in the annex attached.

If you would like to discuss our response or require further information, please do not hesitate to contact me.

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Samantha Ridsdale', written over a horizontal line.

Samantha Ridsdale
Regulation and European Affairs

1. How will the expected growth in wind generation affect the markets in which you operate? What are the key challenges you foresee?

At present, the GB market includes around 4GW of wind generation capacity. There are no variant market arrangements for wind plant and, due to the near to real-time gate closure and self-despatch regime, wind energy is integrated fairly successfully into the market. However, as more wind projects come online, challenges may be faced in a number of areas –

- Ability of the existing transmission and distribution systems to handle large volumes of intermittent generation
- Timely connection of wind projects to transmission or distribution systems
- Appropriateness of the regulatory framework to encourage investment in renewable generation and networks
- Sufficient levels of investment in baseload and peaking plant to support intermittent wind generation
- Sufficient levels of interconnection to facilitate export of renewable energy from the GB market

There is clearly a need for investment, not only in wind generation projects, but in the networks required to support the generation projects. The regulatory environment must provide certainty and reduce investment risk if the increase in wind generation is to be effectively integrated.

2. What are the implications for market rules? Can you identify changes which would better facilitate integration of wind generation, including management of intermittency?

The existing GB market rules allow for effective competition between all types of generator in liquid forward, day ahead and intraday markets. There are no caps or floors on prices and no priority despatch for renewables. This results in all generators bidding into the market at competitive prices and ensures that the outturn price for consumers is as low as possible. We believe that the replication of the GB intraday market across other Member States would encourage greater European market integration and better facilitate the integration of wind energy.

3. Would moving the market's gate-closure closer to real-time facilitate the deployment of wind generation? Would this have any adverse consequences on the functioning of the electricity power system?

The GB market has the nearest to real-time gate closure in Europe. This operates very successfully and ensures that wind generators can provide the most accurate forecast possible, thereby reducing the risk of balancing penalty and enabling the system operator to manage network flows more easily. The market operates on a self-despatch basis and this, coupled with the near to real-time gate closure, ensures that wind generation is fully integrated with conventional fossil fuel plant in the overall energy mix. It ensures that neither renewable nor fossil fuel plant is discriminated against as the balancing decisions made by the system operator are based on a price merit order rather than any preferential despatch. This, in turn, ensures a competitive power market and lower prices for consumers.

4. Are emerging cross-border congestion management models compatible with wind generation? Should further attention on priority be given to intraday capacity allocation mechanisms and markets, in light of the issues associated with forecasting wind generation?

We believe that a focus on expanding the intraday market across Member States will certainly support the integration of wind energy and ensure that cross-border trade is not hampered by differing market structures and lack of liquidity.

However, for markets to work effectively there needs to be sufficient infrastructure in place. Given the potential for wind generation to be concentrated in certain areas regardless of demand (as shown on the Wind Map on p.14 of the consultation), it is critical that there is sufficient cross-border capacity and appropriate market harmonisation to enable the delivery of this renewable energy across Europe. In particular, it should be acknowledged that the areas which have the greatest wind potential (i.e. the UK and Ireland), currently have limited interconnection with the rest of Europe, and GB, in particular, has a transmission tariffing regime which penalises wind generators in remote locations. These issues must be resolved if wind generation is to be a Community-wide tool to combat climate change.

5. Should wind generation be subject to the same balancing obligations and the same types of charges as other types of generation?

We believe that there should not be variant balancing obligations or charges for any particular generation type. It is important that all generators who participate in the balancing market do so on a level playing field, regardless of fuel type or location. It is the near to real-time gate closure, which operates in GB, that supports the uniformity of balancing obligations across generators.

6. Should TSOs engage in research and development to address issues associated with a large share of wind generation included in the network? If so, how should the regulatory framework require or support this?

We support the Eurelectric response to this question.

7. Should wind generators face the same types of network charges as other new generators, calculated using the same methodology? What is needed to provide a sufficient incentive for generation in choosing where to locate? What is needed to provide an appropriate balance of risk among market players? When should this not be the case?

Network charges can be a significant proportion of the cost of wind generation and excessively high or discriminatory charges have the potential to distort competition and prevent investment in wind generation.

It is appropriate that all types of generation should be subject to the same network charging methodology if wind is to be integrated successfully into the overall energy mix. However, regulators should be mindful that even when it appears that wind generation is subject to the same set of charges as other generators, the practical outcome of a particular type of charging methodology may mean that wind generation is unfairly disadvantaged.

For example, in a model which charges generators based on their location and distance from demand, the fact that many wind farms are, by fuel necessity, sited in peripheral areas means that they are subject to much higher charges than more fuel-mobile generators who can locate closer to demand. Although all generators are paying charges under the same basic methodology, the unintended consequence of a locational charge serves to disadvantage peripherally-located renewable generation. This type of charging methodology is used in the GB market and has

discouraged investment in a number of island-based wind developments, thereby halting the progress of renewable generation in these peripheral and less populous areas.

Additionally, network charging on a capacity rather than commodity basis can render wind generation uneconomic as its intermittent nature means that it pays higher charges for each MWh produced.

It is because of the risk of discouraging investment in, and inadvertently discriminating against, wind generation that extensive consideration must be given to a best-fit network charging framework. Generally, the socialised (“postage stamp”), commodity based charging methodology used in, for example, France, presents less adverse unintended consequences for wind generation than locational, capacity based charges. If charges are socialised and commodity based, all generators pay equally for what access they use and therefore compete on a level playing field, whether they are renewable or not. This serves to encourage effective competition across all generation players and therefore reduces the price of electricity for consumers.

8. Broadly, what is the appropriate allocation of responsibilities, risk and cost among market players in developing new network infrastructure (e.g. ahead of or in response to new generation connections)? Should this be different for wind generation? Where is harmonisation required?

We support the Eurelectric response to this question. It is important that the regulatory framework encourages strategic investment and a coordinated approach to network development into order to minimise the risk of stranded assets.

9. Do you agree that the “supergrid” issues for regulators identified in 5.1 are relevant? Is there anything else European regulators should be considering?

We agree that the “supergrid” issues are relevant. In particular, the harmonisation of interconnected markets and transmission regimes is critical to the effective integration of European markets and this issue affects more than just wind generation. It must be ensured that variant tariffing structures across regional markets do not distort competition or provide incorrect locational signals to generators.

10. Is the current ownership structure of offshore lines or their regulatory framework a potential issue for the integration of offshore network? Are there other considerations affecting this ownership structure?

We support the Eurelectric response to this question. The proposed offshore transmission regime in GB does not facilitate a coordinated approach to the construction of offshore networks, but rather allows for a fragmented, point to point approach within GB waters only. It should be recognised that the integration of offshore wind generation will require a strategic approach to offshore networks and there are obvious benefits to interconnection between projects, domestic onshore transmission and neighbouring Member States. It is essential that a more European view is taken into account when designing the offshore regulatory regime. Otherwise, we risk building a series of “dead-ended” transmission assets which may be prohibitively expensive or technically difficult to turn into an effective network at a later date.

11. Do you agree that the Regional Initiatives should be used to address the issues associated with the development of the regional projects? What challenges does this present?

The Regional Initiatives have made limited progress so far and whilst this may indeed be the most logical forum to deal with the development of regional projects, the urgency with which it is necessary to integrate wind generation may not be met. Furthermore, adding the integration of

wind generation to the tasks already in hand with the ERI may present further delays to the existing work in progress.

We believe that coordination between Member States is required to achieve an effective European solution and propose that MS led initiatives, like the North Seas Grid Initiative, are an ideal place to start.

12. What other issues should European regulators consider in relation to the integration of wind generation?

Whilst the European energy regulators may be able to design a framework which facilitates the effective integration of wind generation, other barriers to progress, such as planning procedures, can often be outwith their influence. It is important that Member States review and align all relevant policies to ensure consistency and overall stream-lining of process. There is little point in achieving a perfect regulatory framework for transmission and generation when projects continue to be excessively delayed in the planning and consent stage.