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Dear Steven,

Consultation on Electricity Capacity Assessment 2014: Consultation on methodology

Thank you for providing SSE with the opportunity to comment on the above consultation. We have detailed our answers to the consultation questions in the attached annex. However, we would like to take the opportunity to also reiterate our high level views.

- We believe that VOLL should be included in the assessment of security in order to outline the consequence of supply shortfall. VOLL should be combined with EEU to outline the economic consequences of loss of supply security.
- It is vital that transparent and timely consultation with industry continues prior to the modelling work and that this includes areas such as determination of de-rating factors.
- It is important that risk weighting is applied to NGET's existing data and assumptions regarding commissioning and decommissioning dates and embedded generation.
- We consider that it is important to use a hybrid approach based on real wind generation history and wind speed data to forecast the contribution that wind generation will make to supply.
- We think that LCPD opt-out plant, (and IED opt-out plant in time) should be assumed to have an increasing disappearance factor with time to reflect the likely commercial pressure to front load operating hours and the diminishing case for repair as the operational end point comes closer.
- We believe that other fossil-fuelled plant should be assumed to have increasing disappearance factor going forward as the impact of increased dispatch variability impacts on mechanical reliability.

We hope you have found our comments helpful. If you would like to discuss any of the points we have raised in further detail, please do not hesitate to contact me.

Yours faithfully

Angus MacRae
Energy Economics

Annex: Consultation Questions

CHAPTER: Two
Question 1: Do you agree that the general methodology used for the 2013 report is still valid to analyse GB's generation adequacy in the next five winters from 2014/15 to 2018/19? If not, please explain why and make some specific suggestions for the methodology and their comparative advantages.

We agree that the general methodology is still valid.

Question 2: Do you agree with using a qualitative approach to assess the impact of interconnector flows on LOLE and EEU in our Reference Scenario and sensitivities? If you disagree, please provide justification and suggestions for alternative approaches.

We agree that the general methodology is still valid.

Question 3: Do you agree with our proposed approach to capture the uncertainties of a potential relationship between wind availability and high-demand on the level of risk? Please justify and provide suggestions for alternative options and their comparative advantages.

We agree that the general approach outlined remains appropriate but we consider that it would be useful to include a sensitivity which employs a lower wind EFC for periods of very high demand.

CHAPTER: Three
Question 4: Do you agree with the use of sensitivities to represent the main uncertainties facing the electricity security of supply outlook at the moment? If not, please provide specific reasons and alternatives.

We agree that sensitivities are useful but we consider that the sensitivities are not necessarily independent of each other, so a factor that has little effect on the base case may have a significant effect when combined with other factors. Therefore we believe that combining particular combinations of outcomes is more useful in helping to understand the outlook for security of supply. An example of this is a combination of high demand, low wind/hydro output and lower than historic peak availability of other capacity.

Question 5: Do you agree that our proposed sensitivities around interconnector flows, generation capacity, and peak demand capture the uncertainties that have the most significant impact on the level of risk? If not, what other sensitivities should we consider and why?

- *Peak Demand - We believe that you should include a demand sensitivity that is higher than current levels, even if none of the FES scenarios are higher than current levels. We think that this is prudent given the inherent uncertainty in demand growth and the potential reduced progress in deploying energy efficiency measures.*
- *Interconnectors – we agree that interconnectors are beneficial for security of supply in general but we think that it is important that the assessment retains the underlying assumption that "there are no evident complementarities between GB and its interconnected markets".*

Question 6: Do you agree that the Reference Scenario and associated sensitivities provide a sufficient range of possibilities for the electricity security of supply outlook? Please provide suggestions for alternative options and their comparative advantages.

We believe that an additional scenario is introduced which reflects the possibility that historical winter peak availability will not be a good predictor of future availability. This may arise because of:

- *the limited remaining life and time limited nature of operation for a significant number of plant which may lead to an end of life reliability reduction as the economics of ongoing maintenance become less compelling,*
- *the greater mechanical stress placed on thermal generating plant as it has to respond to the changing operational regime arising from the increased penetration of grid-connected and embedded variable/intermittent generation,*
- *increasing uncertainty over duty levels may mean that more plant are held more frequently in temporary preservation state which reduces their short-term availability,*
- *operational restrictions, such as those arising from service agreements, which limit the ability of plant to respond to short-term market signals.*

Whilst using historic data may capture some of these features we believe it is important to recognise that there will be a lag between changing real availability and such changes impacting on the calculated de-rating factors. This lag could result in the situation where assumed availability exceeds actual which would result in actual LOLE and EEU being higher than modelled.

Question 7: Do you agree that the different demand projections presented in the report provide a sufficient range of possible demand outcomes? If not, please suggest alternatives and their comparative advantage.

As outlined above we consider that it would be prudent to include a demand sensitivity that is higher than current levels, even if none of the FES scenarios are higher than current levels. We think that this is prudent given the inherent uncertainty in demand growth and the potential reduced progress in deploying energy efficiency measures.

Question 8: What sensitivities do you think would be most appropriate to include in our main summary graphs (e.g. Executive Summary), and why?

We think that it would be appropriate to include a scenario which represents a combination of high demand and low supply (both from conventional and wind plant) in addition to the scenarios and sensitivities currently included.