

## SUPPLEMENTARY SUBMISSION FROM OFGEM

### **Follow up questions from the Committee on security of supply**

Thanks for your email with the follow up questions from the Committee. Please let me know if you have any further questions that we can help with.

- **How the closure of Longannet is likely to affect the de-rated capacity margin of 22%?**
- **Whether the Scottish calculation reflects a capacity margin of 22% over a 1 in 600 year event?**

Ofgem's Capacity Assessment considers the GB-system as a whole as the market is operated and balanced on this basis. For reasons of commercial sensitivity, we do not disclose specific assumptions around plant closures that feed into our analysis. However, our assumptions are consistent with National Grid's Future Energy Scenarios, which take into account the latest information in the market. We also test a range of realistic sensitivities around extra availability and loss of capacity due to plants closing or becoming available.

The KPMG analysis quoted in these questions considers Scotland in isolation, without considering the links with the rest of GB. National Grid, SPT and SHE-T have conducted specific analysis on the impact of security of supply without Longannet or Peterhead and concluded that there is sufficient transmission capacity to ensure adequate supplies. This analysis did identify a need for additional voltage control support until 2017, and National Grid have subsequently tendered and contracted for these services. It should be noted that procurement of voltage control is part of the SO's regular procurement of balancing services. This is a common way of managing voltage and NGET has entered into a number of these contracts in the recent past.

The energy system is facing new challenges due to changes in the generation mix, including the closure of ageing and polluting plant. Electricity margins have tightened and as a sensible precaution Ofgem has approved new tools that National Grid can use to manage this in the short term (winters 2014/15 and 2015/16). The de-rated margin figures quoted in Ofgem, National Grid and KPMG analyses do not include the impact of these tools. We are confident that National Grid has the right levers to keep the lights on for GB consumers. However, given the tighter margins at this time there is no room for complacency.

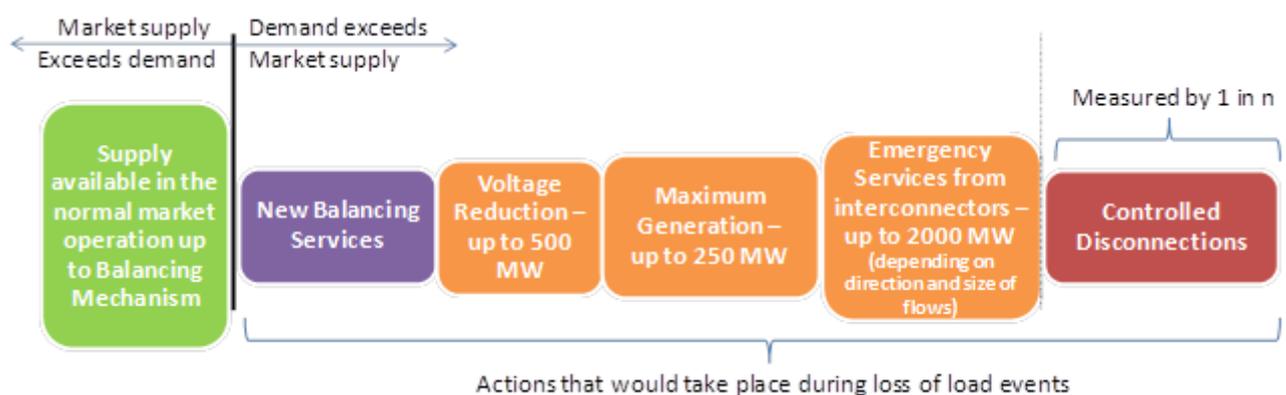
- **What percentage of capacity is potentially available through voltage control, Demand Side Response and demand reduction?**

*Demand side response:* Our Capacity Assessment considers demand on the transmission network level, and as such supply from embedded generation and demand side response (DSR) are seen as a reduction of demand.

National Grid's Future Energy Scenarios (FES) consider the current DSR actions (including triad avoidance and STOR<sup>1</sup>) and potential growth (eg through time-of-use tariffs) of demand side response. The projections for the growth of DSR depend on type of future represented by each scenario (eg to what extent consumers are engaging with the market) and vary between the four FES.

*Voltage reduction:* National Grid as the system operator makes an assessment of the demand reduction that could be achieved through voltage reduction. This assessment is based on NG's operational experience, which is limited because this has not been called on before and is restricted to testing experience. For the Capacity Assessment 2014 report, we assumed that demand can be reduced by 500MW through voltage reduction based on NG's assessment.

*Demand reduction:* For the purposes of this question, we have understood demand reduction to be controlled disconnections. Voltage reduction is one of the mitigation actions the system operator can take to balance supply and demand if demand is higher than supply under normal operation of the system. These actions have little or no impact on customers in most cases. Other available actions, aside from voltage control, include requesting maximum generation from plant or requesting emergency services from the interconnectors. The new balancing services give National Grid an additional tool to balance the system before using these mitigation actions. National Grid will hold these services outside the market and would only use them after all normal market options have been exhausted (and before any other mitigation action), as shown in the graph below. Controlled disconnections would, therefore, only take place if a large supply deficit were to occur that cannot be managed by the normal market operations and mitigation actions available to the system operator.



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