BSA – The Business Services Association

Response to the National Infrastructure Commission Consultation

January 2016

Improving how electricity demand and supply are balanced

1. What changes may need to be made to the electricity market to ensure that supply and demand are balanced, whilst minimising cost to consumers, over the long-term?

In August 2015, the BSA produced a policy paper which called for the publication of a National Energy Security strategy to act as a sub-section of the National Infrastructure Plan[1]. This will allow for better understanding of the government's approach to energy security. Such a strategy would allow a clearer comprehension of where the government plans to invest in energy generation. With a significant proportion of the UK's power generating capacity due to come offline within the next ten years, clarity on future supplies is crucial to maintaining a healthy balance between supply and demand.

The UK needs a range of solutions with a diverse energy mix in order to increase the reliability and stability of its power supplies. Nuclear, particularly with the government's planned developments at Hinkley Point, Bradwell and Sizewell can provide a baseload of power supply. Beyond this, the development of renewables should be encouraged, with a focus on bringing down their price and improving their reliability.

2. What are the barriers to the deployment of energy storage capacity?

The lack of a clear, codified, long-term energy security strategy and stalling construction of new generating capacity presents a barrier. If the market doesn't know where and when future supply capacity is due to come online, it subdues confidence that it is worth investing time, money and skills into the deployment of storage capacity. Energy storage will become of increasing importance, especially as the renewables share of the energy mix increases in the short to medium term. As such, government guarantees may be required to boost market confidence and encourage investment in this vital piece of infrastructure.

Specifically, there is a need to review the regulatory demands on the providers of large scale energy storage as the current system is clearly not designed in a way that supports new provision. At present, energy storage deployment requires a generation licence whilst also being treated as a consumer.

To make a meaningful impact, the BSA considers that deployment should be at a transmission network scale. However, this scale of development will often require consent through the National Strategic Infrastructure Planning regime. This, therefore, points to the importance of a strategic plan for investment and deployment as opposed to a series of urgent demands resulting from reduced capacity in the system.

Energy storage assets in the UK are treated as generators under current regulations. One of the key opportunities for deployment of energy storage is to enable providers to defer or avoid network reinforcement costs. This can help alleviate the high capital costs associated with the construction,

[1] http://bsa-org.com/uploads/publication/file/185/BSA_-_Energy_Security.pdf

operation and maintenance of energy storage facilities. Increasing the provision of battery storage should be explored as costs have declined 50% since 2010 and are expected to see another 50% decline by the end of the decade. The structure of the Capacity Market should be examined as well to all storage onto a more levelled playing field rather than locking in 'old world' solutions.

3. What level of electricity interconnection is likely to be in the best interests of consumers?

The deployment of electricity interconnection offers benefits in terms of security, by adding an alternative source of energy supply to the grid. However, the UK runs the risk of losing control over its energy supplies if we become overly-reliant on foreign energy sources. Interconnection should not be seen as an alternative to the construction of new sources of energy generation so that improving the reliability of energy supplies remains primarily under domestic control.

Another potential advantage of further interconnection with Europe is that the associated emissions remain in the country of generation. Therefore the displacement of emission neutral imports from the continent would also help to meet carbon and other environmental targets. Despite this and despite interconnector developers having access to the 'cap and floor' regulated regime, the UK is still set to miss its 2020 EU target of 10% interconnection. It appears that the main hurdle to achieving this target is securing finance. The Green Investment Bank could be seen as an option for providing funds and partnership on future interconnection projects.

4. What can UK learn from international best practice in terms of dealing with changes in energy technology when planning to balance supply and demand?

Given the complex and often expensive nature of balancing energy supply and demand, nations which are open to innovation, including from business, are more likely to see encouraging results. The Netherlands, for example, has demonstrated the 'Energiesprong' programme, which manufactures and fits energy saving solutions for both houses and businesses offsite and within three days. Solutions such as these offer a more holistic and less piecemeal approach to reducing energy demand. The Smart Meter programme offers an additional means of further reducing energy demand and the BSA encourages its deployment as soon as is feasibly possible.