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6 January 2017

Mr G Clark
Secretary of State for BEIS
4th Floor
3 Whitehall Place
London
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Dear Greg

Call for Evidence: A smart, flexible energy system

Thank you for your call for evidence for “A smart, flexible energy system”, and the associated document “An analysis of electricity system flexibility for Great Britain” (Imperial Collage London & Carbon Trust, June 2016).

We strongly support the vision of a “smarter and more flexible energy system” and agree that this offers “significant benefits for consumers and the economy”

The old model of large scale centralised power stations selling power to passive consumers, and being paid to be around for the tea time peak in demand, is outdated as consumers become more engaged in their energy usage. There are significant savings to be had from operating a more flexible decentralised system (up to £40bn by 2050 according to Imperial College and the Carbon Trust). We believe that this transition will need a range of technologies to meet GB’s electricity demand and ensure security of supply - including demand side response, solar, storage and small sized flexible generation. At PeakGen, we are putting this into practice ourselves – by developing storage options to complement our existing small sized flexible generators. As the Imperial College / Carbon Trust study shows, our small sized flexible generation assets provide “cheaper” and more “cost effective” solutions to ensure security of supply in the GB electricity market.¹

We agree it is essential to maintain security of supply through the transition to this more flexible system

Nothing would be more damaging to the transition to a low carbon economy than if we have problems with security of supply and we agree with the consultation highlighting that “security of supply is vital” and that “greater flexibility will help deliver security of supply”. Small sized flexible generation can help provide that certainty. It can act as the transitional ‘parachute’ when other technologies fail, or when the wind doesn’t blow and/or the sun doesn’t shine.

¹ An analysis of electricity system flexibility for Great Britain, Carbon Trust and Imperial College London (November 2016)

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For example, on Sunday 20th November, a ship's anchor unexpectedly dragged across the interconnector to France interrupting its flow, with a loss of over 1000MW of power. PeakGen's small sized flexible generation were able to provide the energy for the short, but crucial, period before other larger plants (such as coal and base-load CCGTs) could be ramped up to replace the missing energy.

Small sized flexible generation has an important role to play in that flexible, decentralised energy system

Small sized flexible generation has a role to play, alongside DSR, solar, storage and other technologies in a diverse, flexible and secure energy mix. As the Imperial College / Carbon Trust study shows, greater flexibility provides an option value that will be necessary to cope with the increasing penetration of renewables. PeakGen's assets can provide the quick and reliable response (sub 2 minutes) required to meet the troughs in supply from intermittent forms of generation. The option value is of growing importance in the future as more synchronous generation, e.g. coal plants, come off the system against a backdrop of rising electricity demand given the potential electrification of heat and transport.

PeakGen is an essential part of the "disruptive innovation" and "new business models that could challenge incumbents"

The BEIS/Ofgem consultation rightly highlights the crucial role that smaller players will play in driving innovation in new technologies, new business models and challenging the larger incumbent generators. We are one such firm, currently innovating with new technologies and new business models by aggregating our storage and small sized flexible generation assets to provide low cost security of supply solutions to the GB consumer.

However, the Embedded Benefits Review being undertaken at the same time by Ofgem threatens to undermine the viability of smaller players involved in small sized flexible generation, DSR, community and renewable energy projects. The threat to take away one of the largest revenue streams from smaller players, without consideration for due process, has threatened the viability of a strong pipeline of decentralised energy (including community energy and battery storage projects) encouraged through other policy initiatives such as Capacity Market and National Grid's Power Responsive initiative. Furthermore, some of the proposed changes could lead to unintended consequences such as favouring behind-the-meter generation, consequently discouraging the demand turn-down management services and the role of aggregators, such as ourselves, in offering cheaper security of supply solutions for the consumer.

We strongly believe that the viability of a secure, smart and flexible system depends on a consistent and stable policy framework is developed to encourage smaller players and their investors and does not entrench the dominant position of incumbent players.

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We welcome your commitment to removal the double charging of levies on electricity delivered via storage

You rightly highlight that different commercial arrangements for storage can result in some storage projects being disadvantaged because energy that is stored and then released pays the CCL, the Renewables Obligation and other charges twice. This has negative effects on competition and can ultimately lead to higher costs to consumers.

However, different storage technologies have different efficiencies and it is appropriate that in order to ensure that storage is incentivised to be efficient, like any other energy user, the levies are charged on energy directly consumed (or lost) by such facilities. This will discourage the wasteful cycling of less efficient facilities.

We disagree that interconnectors add flexibility to a system, instead they share flexibility between systems

You highlight that interconnectors are an additional source of flexibility to the system and we agree with this, provided they connect to systems with spare flexibility at the times required. Where you interconnect two systems with similar configurations – for example systems with large amounts of wind generation driven by similar weather patterns – the benefits of interconnectors are limited because both systems require their own flexibility to deal with shortages or excess generation at the same time. Before relying on interconnectors to supply flexibility in Britain we believe that much greater analysis of weather patterns, demand and generation across Britain, Ireland and north western Europe is required.

I trust that you find this response helpful and I would be pleased to discuss any of the issues further if that would be helpful.

Yours sincerely,

A handwritten signature in black ink, appearing to be "Mark Draper", with a stylized flourish at the end.

Mark Draper
Chief Executive

cc: David Gray, Chairman – Ofgem