

11 January 2017

To: smartenergy@beis.gov.uk
flexibility@ofgem.gov.uk

re: Ofgem / BEIS call for evidence on “A Smart, Flexible Energy System”

Dear Sir or Madam,

Thank you for the opportunity to respond to this call for evidence on what is a crucial issue in the development of the future energy system. Veitch Cooper Ltd is a consultancy focussed on Distributed Energy Solutions and, among other things, is involved in supporting a community energy project for Fintry Development Trust, funded by the Scottish government and aimed at developing learning about the commercial arrangements needed to underpin local energy projects, and to provide a template for future similar projects.

Our involvement in this project has given us some early insights into some of the issues raised in the call for evidence and the full project findings will be published once the project is complete in April 2018.

As an initial observation, we were surprised that the call for evidence did not make any mention of community energy despite the clear potential that it has as part of the future energy system and the fact that Ofgem’s own work on non-traditional business models highlighted local energy as a theme. Where communities have a direct interest in their own local generation (whether a windfarm visible from the village or the local farmer’s biomass generator) then this can serve as the catalyst for a wider interest and a readiness to help balance the system to make best use of that local energy. Storage can also be expected to play an increasing role in community schemes in future. Clearly cost remains for most consumers the over-riding consideration but in a market where Ofgem and the CMA have both identified significant problems with getting consumers to engage, the important role that community energy can play should not be ignored.

Other points that draw on our early learning which relate to specific questions in the call for evidence are set out below.

Q7 / Q11: Regulatory barriers

The call for evidence highlights the rollout of smart meters as a key enabler for the development of a smart energy system. We would agree with this but have some concerns that the current SMETS functionality, which delivers half hourly meter reads, does not provide the granularity of data that is needed for customers who may wish (through an aggregator) to provide ancillary services where the ability to private rapid demand side respond is required. While the consumer access device may be able to collect more granular information, it is not clear if this would be sufficiently reliable to be acceptable to the SO and others as a basis for payments. There are also concerns as to whether the lack of real-time data provision to the DNOs through the smart meters will inhibit their ability to actively manage a more volatile network, without the use of duplicative monitoring technology elsewhere in the network.



While the intention was that the SMETS spec should be future proof it is important that BEIS / Ofgem (together with industry) continue to keep the specification under review as the market for flexibility services develops, to ensure it remains fit for purpose.

Q12 / Q15: Ability to access and combine different revenue streams to deliver smart tariffs

For parties in the domestic space the opportunities to obtain different revenue streams from the provision of flexibility remain very limited at present. As the call for evidence highlights this should improve significantly with the introduction of elective half hourly settlement. The Fintry project will help provide evidence on the commercial models that can be developed working closely with a supplier and with a DNO to investigate the potential establishment of domestic solutions for constraint managed zones.

While this is early days, we remain confident that if the underlying cost drivers are right (in terms of half hourly settlement and network charging) then there are at least some suppliers out there who would be keen to offer smart tariffs as a way to offer genuine value to customers in a competitive market. As such we do not believe that Ofgem or Government should need to intervene to mandate particular structures of smart retail tariffs.

Q22-24: Smart Distribution Tariffs

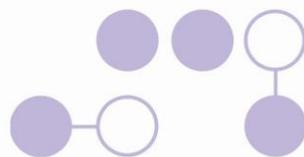
Early indications are that community energy projects can provide real benefits to the DNO in so far as they promote greater matching of supply and demand at a local level. This can help avoid reinforcement costs, particularly in constrained areas, and should also contribute to reduced losses. At present, there is no way for these potential cost savings to be shared with community projects – or more generally for the benefits of local balancing to be signalled through DNO charges or through contracts for the provision of services. Indeed, the current proposals to limit embedded benefits risks taking this in the opposite direction without a proper consideration of the overall picture. The Fintry project has avoided going down a “private wire” path (cf Findhorn) for fear of increasing overall system charges. We believe maximum system benefit can be derived from sharing the benefits of local balancing with community projects.

Q30: Smart Appliances and Q48 innovation funding

In the domestic sector, currently the largest loads are related to heating particularly for homes with existing electric heating or with heat pumps being installed. These loads can be configured to provide direct load control with the building mass providing some level of thermal energy storage (and hence minimal loss of comfort) until the electric heating is restarted. Considering the links with the heat strategy as part of the work following this call for evidence would allow the government to adopt a more joined up, systems approach thereby maximising the opportunity for low carbon heat deployment aligned with system flexibility.

The Fintry project will apply direct load control for homes with both traditional electric storage heating and heat pumps. The temperature will be monitored to understand what the implications are for comfort and how this varies by property type. This sort of learning is essential for both the heat strategy and the flexibility work and BEIS should consider this in looking at opportunities for innovation funding.





Moreover, customers who currently use electric heating are, as Ofgem's own work on off-gas grid customers highlights, particularly prone to fuel poverty. There is therefore an opportunity here – if the value of their flexible loads could properly be reflected in lower charges – to help tackle fuel poverty as well as driving forward the domestic flexibility agenda. If not, and the focus remains on top end “smart homes” and electric vehicles, this risks being another area of energy policy that benefits primarily the better off.

Q40: Consumer protection

Clearly if direct load control is being applied to a service as critical as heating, consumer protection becomes a big concern. This has been a paramount concern within the SMART Fintry project and the ability for consumers to over-ride any direct load control is built into the system. High levels of support are also available from members of the community to explain system operation and to help users. However, if such direct control was to become a more conventional commercial service Ofgem would need to consider carefully the case for consumer protection.

On data privacy the key issue is consent to use of the data which is already provided for in legislation.

Q45: System roles and responsibilities

Given that the development of distributed generation projects and also large domestic heat loads (with heat pumps) involves the DNO in assessing the implications for their network they are more likely to have the relationships, and the will to find creative solutions to enable connection, even for small scale projects such as community energy schemes. Hence it seems right that the DSO should have a core role in the smart energy system of the future and facilitating local balancing.

However, as the call for evidence highlights this will need improved interfaces between the SO and DSO and encouraging pilots of different approaches is critical in terms of identifying the practical challenges that will arise, before any final decision is taken on the appropriate model for the future.

Yours sincerely,

Maxine Frerk
Regulatory Expert, Veitch Cooper Ltd

