

Regen & Electricity Storage Network
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Rt Hon Anne-Marie Trevelyan MP, Minister for Business, Energy and Clean Growth
Department for Business, Energy and Industrial Strategy
1 Victoria Street
London, SW1H 0ET

Re: Smart Systems and Flexibility Plan – 2021 update

Cc: BEIS Smart Systems team

Dear Anne-Marie,

I am writing on behalf of our members of Regen and the Electricity Storage Network to welcome the government's commitment to updating the Smart Systems and Flexibility Plan and provide recommendations for measures our members believe should be included in the Plan.

Regen is an independent, not-for-profit centre of expertise in sustainable energy with nearly 20 years' experience in transforming the energy system. Regen is also a membership organisation and manages the Electricity Storage Network (ESN). Regen and the ESN have 150 members from across the energy sector and this letter draws on their input.

We have been pleased to see the policy announcements last Autumn on climate and energy. The 10 Point Plan, National Infrastructure Strategy and Energy White Paper all set leadership and ambition to get us to net zero and aid our green recovery. These announcements provided high level direction to our targets and our members are keen to see the detailed plans to realise those goals.

The Smart Systems and Flexibility Plan has been a vital piece of the policy puzzle in the last few years; the new iteration should demonstrate the level of ambition set out in the 10 Point Plan and Energy White Paper whilst setting out tangible and measurable actions that BEIS, Ofgem and industry can take.

Our five key recommendations are:

- 1. Set out a clear roadmap for flexibility, including clear targets for deployment**
- 2. Measure and value carbon in flexibility markets**
- 3. Define storage in legislation**
- 4. Continue to improve dispatch in National Grid ESO's control room**
- 5. Ensure network charging approaches do not disincentivise flexibility**

We have provided further details below and will be engaging with your officials on issues such as fire safety and tax treatment. We have been involved in numerous events and discussions over the last year to help shape the Plan and we look forward to its publication and to working with you and the BEIS team to create a flexible, net zero electricity system.

Yours sincerely,



Madeleine Greenhalgh
Policy and Advocacy Manager, Regen & ESN

Annex

1. Set out a clear roadmap for flexibility, including clear targets for deployment

As flexibility starts to be deployed at scale on the system and the industry evolves, the sector is looking for a clear path to maintain investor confidence. Investors in flexibility will need to become more comfortable with merchant risk and, where possible, the aspects of merchant models that make investors more cautious will need to be mitigated. A clear roadmap for flexibility which shows the role that it will play in the future renewable system would provide investors with some certainty that there is longevity in their investment.

Long duration storage is clearly a key priority for the government, and the innovation funding will be a welcome boost to this part of the sector. However, how long duration and long term storage will be needed and integrated into the system is unclear. A roadmap for flexibility should include a clear plan for long duration and long term storage.

Whilst the general aspiration for flexibility, and particularly storage, is clear in a broad sense from government messaging, the route that flexibility will take is still unclear. The government should produce a clear plan for flexibility in the Smart Systems and Flexibility Plan including targets of how much flexibility will be needed.

2. Measure and value carbon in flexibility markets

Zero carbon flexibility is essential for a net zero electricity system; we now need to send the right signals through flexibility markets to drive down the carbon intensity of flexibility services and put us on a pathway to zero carbon.

If the sector is to fully and properly assess how to increase participation of low carbon technologies to provide flexibility, we must be able to analyse and understand the carbon emissions of the types of assets winning contracts, as well as the overall carbon intensity of a market as it runs. Ofgem should mandate that National Grid ESO and Distribution Network Operators publicly report on the carbon intensity of flexibility services and markets

To achieve zero carbon flexibility, markets must explicitly value carbon. A carbon price is unlikely on its own to be an effective way of sending the right signals through flexibility markets. Therefore, policy makers and regulators must now consider market mechanisms that value carbon inherently. BEIS should provide research and open industry debate on the options for putting zero carbon at the heart of flexibility markets.

3. Define storage in legislation

As a relatively new entrant to the electricity system, treatment of electricity storage has been ad-hoc and inconsistent, applying and adapting existing rules to fit the industry. This has been an understandable approach, given the need to see how storage evolves as a technology and create appropriate rules and regulations, rather than making pre-emptive decisions early on in its development. However, storage is now firmly established in the electricity system; it is providing many essential services to the grid and behind-the-meter and plays a significant role in future projections for decarbonisation. To realise these ambitions and deploy storage at the necessary scale, as well as ensuring that it works in balance with the whole system, a more structured approach to storage is needed.

As it currently stands, electricity storage sits, by default, under the electricity generation licence. However, due to the distinct differences between the technologies this means regulatory changes must be made to ensure there is fair treatment of electricity storage (for example, see the issue regarding network charging below).

The first Smart Systems and Flexibility Plan committed in 2017 to providing clarity for storage by defining it as a subset of generation in the Electricity Act 1989 and modifying the generation licence for storage. The latter occurred late last year, but there is no timeline for defining storage in

legislation. The repeated commitments to this are appreciated, but no timeline has been given other than ‘when parliamentary time allows’.

There is some debate still within the industry as to whether storage should have a separate licence of its own – the longer there is legislative uncertainty, the more this debate continues.

4. Improve dispatch in the control room

Previous iterations of the Smart Systems Plan have included measures to improve markets for flexibility. National Grid ESO has made considerable progress in developing and creating markets for zero carbon flexible assets and improving how new technologies access those markets. However, making best use of flexibility hinges on actions taken within the control room and this remains a barrier to integrating new flexible assets into the electricity system.

The ESN has facilitated constructive conversations between flexibility providers and National Grid ESO to address concerns about the approach to dispatching assets from the control room. The key concerns raised are around the ability of the control room to dispatch smaller assets – most zero carbon flexibility assets are smaller assets which the control room is not set up to dispatch. The ESO is taking steps to address this issue, which has several solutions, including improving culture in the control room, improving IT systems and providing publicly available data about the rates and decisions behind the dispatch of assets. The Smart Systems Plan should include these actions and track the ESO’s progress in addressing them.

5. Ensure network charging approaches do not disincentivise flexibility where it’s needed

There are currently significant disincentives to flexible assets being built in locations where they can address constraints. Transmission Network Use of System (TNUoS) generator charges strongly incentivise distribution-connected flexibility in the south of England over transmission-connected flexibility in the north of England and Scotland. These areas have high levels of generation constraint, which flexible assets can help to resolve, but developers are dissuaded from locating in these areas because of high TNUoS charges.

Current reforms to network charges must reflect the investment case for flexible assets and potential benefits to the system of sending the right signals on where these assets should be located.