



NEW PLAN FOR ENERGY STORAGE, SMART SYSTEMS AND FLEXIBILITY

The Government has published its plan for a smart and flexible energy system¹. The Government sees a £17bn – 40bn boost to the economy through the implementation of smart energy, and the plan therefore forms a central part of its Industrial Strategy. The plan sets out a series of actions underway and to be pursued, which focuses on removing barriers to competition and technological innovation. This follows a November 2016 Call for Evidence².

The Plan sets out some principles guiding its approach to creating a smart flexible energy system. The overall objective is establishing a competitive market for flexibility services within the energy system including energy storage, demand-side response (DSR), interconnection as well as traditional and renewable generation. Beyond this, the principles include:

- An overriding objective of security of supply;
- Creating improved visibility and transparency of markets and market signals between buyers and sellers of flexibility;
- Encouraging innovation; partnership working between regulators and industry; and recognition of the place of smart energy in the wider evolution of the economy (and in the UK Industrial Strategy); and
- Helping energy consumers control their energy use and bills.

Key Issues

- New Government Plan aims to ensure security of energy supply, improve competitive markets in flexibility services, and encouraging innovation
- The Plan aims to remove barriers to energy storage, in particular in relation to charging, final consumption levies and the connections process
- Other key actions proposed to boost demand side storage, and to facilitate electrical car charging and smart appliances

REMOVING BARRIERS TO ENERGY STORAGE

A significant focus of the Plan is how to ensure the system secures most benefit from energy storage. The actions proposed aim to create a level playing field for energy storage, compared with other flexibility options, and to remove other barriers to energy storage development. Key actions include:

- **Legislative Definition of Storage and Modified Generation Licence:**
The Government will include a definition of storage as a distinct subset of the 'generation asset' class (when Parliamentary time allows). Ofgem will then consult on a new modified form of generation licence for storage in

¹ [Upgrading Our Energy System - Smart Systems and Flexibility Plan - July 2017 – BEIS and Ofgem](#)

² See our briefing: [Energy Storage features in Call for Evidence on "smart" energy system – November 2016](#)

summer 2017 (for implementation in Summer 2018). This would be a move away from the current treatment of storage as standard generation.

- **Ownership of Storage Facilities:** Because of competition concerns, Ofgem has decided that network companies should not own or operate storage. It is looking at reporting requirements for those Distribution Network Operators (DNOs) that do currently own storage, and may consider further ownership 'unbundling' requirements in the future.
- **Removal of Final Consumption Levies:** As a result of the modified licence, storage facilities will be able to exempt themselves from paying final consumption levies (i.e. the costs of the renewables obligation, feed-in tariffs and capacity market).
- **Clarity on Co-Location of Generation and Storage Facilities:** Government and Ofgem intend to give further clarification regarding co-location to ensure that it does not put financial incentive support for renewable generation assets at risk under Contracts for Difference, the Renewables Obligation or Feed-in Tariffs.
- **Targeted Charging Review:** In order to tackle concerns about energy storage being charged unfairly for network use, Ofgem's view is that storage should not pay the "demand residual" element of network charges at transmission and distribution level; and also that it should only pay one set of balancing system charges. Ofgem is currently considering potential changes under its Targeted Charging Review. This is part of a wider review of how all users are charged for using the network – the aim is to better reflect the actual costs and benefits of individuals' use of the network in the network charges they have to pay. Ofgem will publish a working paper on this wider review in Autumn 2017.
- **Improvement of Connections Process for Storage:** Ofgem will seek to improve the process by which storage is connected to networks, in discussion with industry. Flexible connection and financial incentives for DNOs to provide connections are being considered.
- **Planning Regime and Health & Safety:** The Government will look at simplifying the planning regime for storage facilities including through use of guidance and a new threshold for storage facilities. The Government will also develop a health and safety framework for storage.
- **Innovation:** In addition to increasing the "smart innovation" programme funding by £20m to £70m, the Plan announces a possible 'first of a kind' large scale energy storage demonstrator competition. This will follow the programme of feasibility studies into large scale storage (and other flexibility services) which is currently underway through a BEIS competition.

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OTHER KEY NEW ACTIONS

- **Mandatory Half-hourly settlement and smart tariffs:** The Government is considering whether to impose mandatory half-hourly settlement for all electricity consumers in order to encourage suppliers to offer smart tariffs.
- **Capacity Market and DSR:** Recent Capacity Market auctions have shown DSR to be uncompetitive. In order to reduce costs, the Government is considering simplifying metering requirements and allowing providers to

"stack revenues" between the Capacity Market and ancillary services. Ofgem will publish a Capacity Market rules decision on this soon.

- **Electric Vehicle Charge-Points:** New powers will be created to set standards for electric vehicle charge-points to ensure they can be used for DSR and vehicle-to-grid technologies (through the Automated and Electric Vehicles Bill announced in the June Queen's Speech).
- **Smart Appliance Standards:** Government will work with industry, and at EU and international level, to develop standards for smart functionality of appliances. This will aim to enable consumers to contribute to, and benefit, from flexibility services. There will be a new focus on cyber security to ensure the security of connections to smart appliances.
- **Independent Aggregators and the Balancing Mechanism:** Ofgem will take steps to allow Independent Aggregators to access the balancing mechanisms, if current industry discussions to modify the Balancing and Settlement Code are insufficient.
- **System Operator Framework:** In conjunction with the plans of the grid System Operator (National Grid) to reform ancillary services, Ofgem will consult on a new regulatory framework for the System Operator to be implemented by April 2018.

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The Plan shows that the creation of a smart flexible energy system is a work in progress that has a multitude of different angles, constraints and opportunities. One area that the Plan does not cover is how the regulatory proposals correlate with the action being taken at European level³. This is a particular issue in relation to the regulatory treatment of energy storage: Whereas the EU is proposing opening up the ownership of storage by DNOs, the UK appears to be dismissing this option.

³ See our briefing: [EU Energy Union Package - Reforms to Energy Market and Renewable Energy Legislation – December 2016](#)

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