

Electricity market participants,  
providers of electricity ancillary  
services, the Electricity System  
Operator, Transmission Owners,  
and other interested parties

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Date: 20 October 2021

## **Review of the regulatory framework for ancillary service assets and clarification on our short-term treatment of synchronous condensers**

This letter sets out our intention to carry out a review of the regulatory and licensing arrangements for assets dedicated to providing electricity ancillary services. It also confirms that as a short-term, temporary position, whilst we undertake this review, we will continue to grant generation licences for the operation of a synchronous condenser<sup>1</sup> through our powers under the Electricity Act 1989 ('the Act').

### **Background**

The Electricity System Operator (ESO) is currently running several 'pathfinders'<sup>2</sup>, which are procuring solutions to key electricity transmission system needs, including system stability and voltage. This has led to market participants seeking to develop new assets dedicated to providing these services. Several parties have developed or are developing proposals for synchronous condensers. These assets contribute to system inertia and help improve fault levels to support the stability of the system. They also provide voltage support by regulating reactive power levels in the part of the network they are located.

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<sup>1</sup> Also known as synchronous compensators.

<sup>2</sup> For more information please see: <https://www.nationalgrideso.com/future-energy/projects/pathfinders>

In October 2020, we decided to change the electricity generation licence to clarify that electricity storage<sup>3</sup> is an activity that licence holders are authorised to carry out under a generation licence.<sup>4</sup> Several developers of synchronous condensers have subsequently applied for generation licences, on the basis that they consider their solutions are a form of electricity storage. We granted these licences noting that it is up to market participants to determine whether their activities require a licence under the Act, and to comply with all relevant industry rules and regulations. We also communicated to these parties that their interpretation of synchronous condensers as electricity storage was under review and being discussed with the Department for Business, Energy, and Industrial Strategy (BEIS).

In September 2020, we also received an application for an electricity transmission licence from Mersey Reactive Power Limited (MRPL), who has been awarded a contract by the ESO to provide voltage support under the ESO's Mersey Pathfinder. MRPL intends to deliver this using a shunt reactor, which is a form of inductor that absorbs reactive power. In our decision on the regulatory framework for electricity storage, we expressly clarified that inductors, and therefore shunt reactors, should not fall under the definition of storage. We plan to consult shortly on whether to grant a transmission licence to MRPL.

### **Review of the regulatory framework for ancillary service assets**

The purpose of synchronous condensers and shunt reactors is to provide ancillary services to the electricity system, including stability and voltage support. The legislation on licensing was introduced when these ancillary services were typically provided by large generating sites or transmission networks. At the time, generation, transmission, and demand were much more clearly distinct activities. As we move to a decarbonised energy system, these distinctions are becoming less clear.

Additionally, new sources of stability and voltage will become increasingly important for meeting our zero carbon goals. It is important that the right regulatory regime is in place to support these. We believe there is a need for a review of the current licensing regime and regulatory framework for dedicated ancillary services, to establish whether it is fit for purpose for the future electricity system.

Our review will consider how assets dedicated to providing ancillary services should be treated, including whether there is a long-term need to licence these activities. This could result in us recommending changes to legislation to BEIS, for example to either introduce a

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<sup>3</sup> As defined in the electricity generation licence, electricity storage is the conversion of electrical energy into a form of energy, which can be stored, the storing of that energy, and the subsequent reconversion of that energy back into electrical energy

<sup>4</sup> <https://www.ofgem.gov.uk/publications/decision-clarifying-regulatory-framework-electricity-storage-changes-electricity-generation-licence>

new, tailored category specifically for dedicated ancillary services or to make clear that these solutions should not be licensed. Our review will also consider whether any changes to arrangements might be needed more widely to ensure there is a level playing field for dedicated ancillary service assets.<sup>5</sup>

Stakeholders have raised concerns to us with how Final Consumption Levies (FCL) apply to these assets. FCLs are applied on the consumption of electricity to recover the costs of government schemes such as the Renewables Obligation, Feed-in Tariffs, Contracts for Difference and the Capacity Market. Currently, generation and transmission licence holders are not liable to pay FCLs for the electricity supplied to their premises for the purpose of carrying on activities which they are authorised by their licence to carry on. However, unlicensed providers of stability and voltage are not exempt from these charges.

We do not consider the current FCL regime envisaged assets dedicated to providing ancillary services when it was originally designed. The payment of FCLs by these providers could materially affect the outcome of the pathfinders and any future competition for system services. This issue needs to be properly considered to ensure there is effective competition in the electricity sector which can support an efficient transition to a decarbonised system. We will therefore consider how the licensing, charging and levy frameworks interact and whether they are working effectively as part of our review. We believe it is important that the subsequent implementation of any changes to the licensing regime and/or the charging and levy frameworks are well coordinated, to avoid adverse impacts on competition for ancillary services in the future.

### **Clarification on the short-term regulatory treatment of synchronous condensers**

We have further reviewed relevant existing definitions in the Act and the electricity generation licence. As highlighted, we consider these existing definitions did not anticipate the standalone operation of synchronous condensers. As a short-term, temporary position, in the absence of clarity now on the appropriate enduring regulatory treatment for this activity, we intend to continue to grant generation licences for the operation of synchronous condensers, subject to our usual assessment processes.<sup>6</sup>

Whilst we are still forming our view on the right enduring treatment of synchronous condensers, we recognise that their consumption of electricity is not for the purposes of meeting demand. The main purpose of the synchronous condenser projects in the ESO's pathfinders is to provide system stability. To fulfil this purpose, they store energy in their

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<sup>5</sup> We note that future changes to legislation will depend on the availability of Parliamentary time and so changes may not be possible within short timeframes.

<sup>6</sup> Please see: <https://www.ofgem.gov.uk/industry-licensing/how-become-licensed-gas-or-electricity-company>

rotational mass which is released back to the system when the system frequency drops and absorb energy when the frequency rises. This dynamic behaviour supports the stability of the system.

Please note that this is a short-term, temporary position on the regulatory treatment of synchronous condensers. It clarifies our current thinking on the 'best fit' treatment under a framework that was not specifically designed for these assets. It does not pre-empt the conclusions of our review of the appropriate long term regulatory framework and any recommendations we may want to make to BEIS. In future, once there is clarity on the right enduring solution for ancillary services, and we are clear the wider arrangements support a level playing field, it is possible we may decide to revoke these licences. Additionally, BEIS have committed to defining electricity storage as a distinct subset of generation in primary legislation when parliamentary time allows.<sup>7</sup> We may therefore need to further review our short-term treatment synchronous condensers considering any changes to legislation.

For the avoidance of doubt, any sites with a capacity of less than 50MW are not prohibited from operating without a generation licence under the Act. We therefore anticipate that whilst operators of synchronous condensers are eligible to receive a generation licence in the short term, most providers will not be required to hold one to carry out this activity.

We also do not consider this short-term position prevents Transmission Owners (TOs) from owning and operating this technology for system resilience purposes. This is due to recent changes made to the electricity transmission licence which enable TOs to own storage in certain circumstances.<sup>8</sup> We will review whether any further changes are needed to the transmission licence to clarify this point.

In reaching this position, in addition to considering existing definitions in the Act and licences, we have also considered energy consumers' wider interests. We believe this course of action is consistent with our aim to help facilitate effective competition for system services that are critical for delivering Net Zero goals at lowest cost to consumers. We recognise that continued uncertainty for participants in the ESO's stability pathfinders could lead to inefficient tender outcomes, which could increase the cost to consumers of maintaining a stable system over the next decade.

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<sup>7</sup> See page 42 of the Smart Systems and Flexibility Plan 2021: [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1003778/smart-systems-and-flexibility-plan-2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1003778/smart-systems-and-flexibility-plan-2021.pdf)

<sup>8</sup> See Condition B6 (Restriction on Activity and Financial Ring Fencing), 1A of the electricity transmission licence standard conditions

## **Next steps**

We expect the ESO to reflect our clarification on the treatment of synchronous condensers in its connections processes and revise existing offers where appropriate.

We will now begin work on our review of the appropriate enduring regulatory treatment of dedicated ancillary service assets, including the levies and charges that should apply to this activity. We plan to engage further in due course but would welcome any immediate views or feedback from stakeholders on the scope and key considerations for this review.

For any questions or feedback on the contents of this letter, please get in touch with [david.beaumont@ofgem.gov.uk](mailto:david.beaumont@ofgem.gov.uk). For any queries about the licensing process please contact [licensing@ofgem.gov.uk](mailto:licensing@ofgem.gov.uk).

Yours sincerely,

**David Beaumont**

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