

All interested parties,  
stakeholders in GB and beyond,  
and other regulatory bodies

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13 July 2021

Dear colleagues,

**Decision on the Electricity System Operator’s proposal for the Terms and Conditions to act as defence and restoration providers, for the list of significant grid users responsible for implementing on their installations measures from other EU Network codes, and for the list of high priority significant grid users**

On 20 December 2019, we<sup>1</sup> received three amended proposals from the relevant Transmission System Operator (TSO) for Great Britain (GB), National Grid Electricity System Operator (ESO)<sup>2</sup>, in accordance with Article 4(2)(a) to (d) of Commission Regulation (EU) 2017/2196<sup>3</sup> establishing a network code on emergency and restoration (the NCER Regulation) for approval.<sup>4</sup> The resubmission included proposals on:

- a) the Terms and Conditions to act as defence and restoration service providers (the T&Cs);
- b) the list of significant grid users (SGUs) responsible for implementing on their installations the measures that result from mandatory requirements on three EU

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<sup>1</sup> The Gas and Electricity Markets Authority. Ofgem is the Office of the Authority. The terms “Ofgem” and “the Authority,” “we” and “us” are used interchangeably in this letter.

<sup>2</sup> This is in line with our assignment of obligations. See decision letter here: <https://www.ofgem.gov.uk/publications-and-updates/decision-assignment-transmission-system-operator-obligations-under-emergency-restoration-regulation-within-gb>

<sup>3</sup> Commission Regulation (EU) 2017/2196 of 24 November 2017 establishing a network code on electricity emergency and restoration. The NCER Regulation came into force on 18 December 2017. Accessible at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R2196&from=en>

<sup>4</sup> Following the UK’s exit from the EU, references to this Regulation are as amended by The Electricity Network Codes and Guidelines (System Operation and Connection) (Amendment etc.) (EU Exit) Regulations 2019 – available here: <https://www.legislation.gov.uk/uksi/2019/533/made>

- Network Codes<sup>5</sup> and/or from national legislation and the list of the measures to be implemented by these SGUs (the SGU list); and
- c) a list of high priority significant grid users and the terms and conditions for their disconnection in the System Defence Plan and System Restoration Plan (the High Priority SGU list).

This letter sets out our decision to approve the SGU list and the High Priority SGU list. We acknowledge that the list of the measures to be implemented by those SGUs are set out within the Grid Code. We also acknowledge that the T&Cs are already set out within the Grid Code, Balancing and Settlement Code (BSC) and the ESO's black start strategy and procurement methodology. The letter also outlines the necessary next steps that must be taken.

## **Background**

The NCER Regulation requires us to make a decision on the T&Cs, the SGU list and the High Priority SGU list. The ESO first submitted these proposals to us on 18 December 2018 and following a review of this submission, we published a request for amendments to the proposals on 19 June 2019.<sup>6</sup> We received the amended proposals on 19 August 2019. We concluded that the proposals could still not be approved and we published a second request for amendments on 21 October 2019.<sup>7</sup>

We received the new amended proposals on 20 December 2019 following a consultation that the ESO undertook on the amended proposals.

### *1) The T&Cs*

In accordance with Article 4(4) of the NCER Regulation, each TSO must develop a proposal for the T&Cs to act as defence and restoration service providers. Article 4(4) of the NCER Regulation specifies that:

*"The terms and conditions to act as defence service provider and as restoration service provider shall be established either in the national legal framework or on a contractual basis. If established on a contractual basis, each TSO shall develop by 18 December 2018 a proposal for the relevant terms and conditions, which shall define at least:*

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<sup>5</sup> The EU Network Codes are: Regulation (EU) 2016/631 (RfG), Regulation (EU) 2016/1388 (DCC) and Regulation (EU) 2016/1447 (HVDC).

<sup>6</sup> Decision available at:

[https://www.ofgem.gov.uk/system/files/docs/2019/06/decision\\_ncer\\_proposals\\_tc\\_sgu\\_list\\_high\\_priority.pdf](https://www.ofgem.gov.uk/system/files/docs/2019/06/decision_ncer_proposals_tc_sgu_list_high_priority.pdf)

<sup>7</sup> Decision available at:

[https://www.ofgem.gov.uk/system/files/docs/2019/10/rfa2\\_ncer\\_proposals\\_tcs\\_sgu\\_list\\_hp\\_sgu\\_list.pdf](https://www.ofgem.gov.uk/system/files/docs/2019/10/rfa2_ncer_proposals_tcs_sgu_list_hp_sgu_list.pdf)

- a) *the characteristics of the service to be provided;*
- b) *the possibility of and conditions for aggregation; and*
- c) *for restoration service providers, the target geographical distribution of power sources with black start and island operation capabilities.”*

In our second request for amendments on 21 October 2019, we requested the ESO to:

- 1) Replace the broad references in the mapping by detailed references to the specific provisions of the Grid Code in the T&Cs submitted for compliance with Article 4(4)(a) and 4(4)(b) of the NCER Regulation;
- 2) Define the possibility of and conditions for aggregation of defence and restoration service providers in the resubmitted T&Cs submitted for compliance with Article 4(4)(b) of the NCER Regulation;
- 3) If additional provisions are needed for complete T&Cs, to initiate changes to introduce them into the GB codes, and, in the meantime, to provide them as part of an intermediate methodology of the T&Cs within the system defence/restoration plans; and
- 4) Amend the relevant GB codes to ensure the alignment of the code modification process of the relevant code with the amendment process set in Article 7 of the NCER Regulation for the provisions that constitute the T&Cs.

The resubmitted proposal states that the T&Cs are covered by a set of specific existing provisions currently in the Grid Code, the BSC and the ESO’s black start strategy and procurement methodology. The ESO has proposed that these provisions constitute the T&Cs to act as defence and restoration service providers. The ESO provided us with a table mapping the requirements of the NCER Regulation against the provisions of the existing documents mentioned above. The ESO submitted this to us alongside a letter explaining how the mapping table demonstrates compliance with the relevant provisions of the NCER Regulation.

Furthermore, on 7 May 2020 the ESO implemented Grid Code modification GC0143<sup>8</sup> as an urgent modification brought about by the COVID-19 pandemic. GC0143 allows for last resort disconnection of embedded generation by Distributed Network Operators (DNOs) as an emergency action if required. Although embedded generators are not Connection and Use of System Code (CUSC) parties and bound by the Grid Code, this new emergency action afforded to the DNOs meant that the T&Cs submitted by the ESO were no longer a

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<sup>8</sup> GC0143 information available here: <https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0143-last-resort-disconnection-embedded>

complete description of the characteristics of defence and restoration services that the ESO offers to the market. GC0143 was only a temporary modification and has since been succeeded by GC0147<sup>9</sup> which is the enduring solution for this modification. Following the implementation of GC0147 into the GB codes on 17 May 2021, we now agree that the proposal for the T&Cs accurately reflects the current obligations of defence and restoration service providers in GB.

## *2) The list of SGUs*

In accordance with Article 4(2)(c) of the NCER Regulation, each TSO must submit to its regulatory authority:

*(c) the list of SGUs responsible for implementing on their installations the measures that result from mandatory requirements set out in Regulations (EU) 2016/631, (EU) 2016/1388 and (EU) 2016/1447 and/or from national legislation and the list of the measures to be implemented by these SGUs, identified by the TSOs under Art. 11(4)(c) and 23(4)(c);*

In our second request for amendments on 21 October 2019, we requested the ESO to:

- 1) Amend the list of SGUs to include all SGUs who are subject to the mandatory requirements of the RfG, DCC and HVDC codes, including non-CUSC parties;
- 2) Provide clear justification of its proposed allocation of measures to the SGUs; and
- 3) Replace the broad references in the mapping of the measures to be implemented by SGUs with detailed references to the specific provisions of the Grid Code for compliance with Article 11(4)(c) and 23(4)(c).

Following our request for amendments, the resubmitted proposal states criteria that the ESO believes will allow market participants to self-identify as SGUs and these criteria are now inclusive of all SGUs that are subject to the mandatory requirements of the RfG, DCC and HVDC codes, including non-CUSC parties. The broad references in the mapping of the measures to be implemented by SGUs have now been replaced with more specific references to the Grid Code for the measures to be implemented by these SGUs.

## *3) The High Priority SGU list*

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<sup>9</sup> Information and documentation for GC0147 can be accessed here: <https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0147-last-resort-disconnection-embedded>

In accordance with Article 4(2)(d) of the NCER Regulation, each TSO must submit to its regulatory authority:

*(d) the list of high priority significant grid users referred to in Articles 11(4)(d) and 23(4)(d) or the principles applied to define those and the terms and conditions for disconnecting and re-energising the high priority grid users, unless defined by the national legislation of Member States.*

In our second request for amendments on 21 October 2019, we requested the ESO to amend its proposal of High Priority SGUs or the Grid Code to ensure consistency between both documents on the High Priority SGUs in GB.

Following our request for amendments, the resubmitted proposal now considers that an SGU is of high priority if it is, owns or operates one of the following:

- *"A Black Start Service Provider [in relation to the system restoration plan];*
- *A Large Power Station connected directly to the National Electricity Transmission System; or*
- *An Embedded Large Power Station*

*[...] the terms 'Embedded' and 'Large Power Station' have the same definition as that defined in the Grid Code."*

## **Decision**

We have reviewed the proposals in line with the requirements of the NCER Regulation, the wider objectives of the Regulation (EC) No 2019/943<sup>10</sup>, as amended by the Electricity and Gas (Internal Markets and Network Codes) (Amendment etc.) (EU Exit) Regulations 2020,<sup>11</sup> and our statutory duties and obligations. We furthermore engaged with the ESO to clarify our understanding of the proposed T&Cs, the SGU list, and the High Priority SGU list.

The ESO has made positive changes as a result of our requests, and we now consider that the proposed T&Cs, the SGU list, and the High Priority SGU list meet the requirements of Articles 4(4), 4(2)(c) and 4(2)(d) of the NCER Regulation. For the reasons outlined below, we hereby approve the SGU list and High Priority SGU list. We acknowledge that the list of

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<sup>10</sup> Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity is available at: <https://eur-lex.europa.eu/eli/reg/2019/943/oj>

<sup>11</sup> The UK SI amendment of the Electricity Regulation is accessible at: <https://www.legislation.gov.uk/ukxi/2020/1006/contents/made>

the measures to be implemented by those SGUs are set out within the Grid Code. We also acknowledge that the T&Cs are already set out within the Grid Code, BSC and the ESO's black start strategy and procurement methodology.

### *1) The T&Cs*

The ESO has made improvements to its proposed T&Cs by providing more specific references to the GB codes. We acknowledge that the referenced sections of the Grid Code, BSC and ESO's black start strategy and procurement methodology constitute a complete set of T&Cs. We set out our reasons in the following paragraphs and explain why we consider that the requirements of Article 4(4)(a) to (c) of the NCER Regulation are met.

#### *a) Article 4(4)(a) - the characteristics of the service to be provided*

We previously asked the ESO to replace the broad references in the mapping by detailed references to the specific provisions of the Grid Code in the T&Cs submitted for compliance with Article 4(4)(a) of the NCER Regulation.

The ESO has narrowed down the Grid Code references to only those that provide the characteristics of the defence and restoration services provided by defence and restoration service providers. We note that in the latest submission of its proposal, the ESO has excluded documents that had been proposed in its previous submission (i.e. section 4 of the black start service contract terms; and the black start technical requirements and assessment criteria). We agree with the ESO's assessment that their previous inclusion was unnecessary. This is because we consider that the proposed sections of the grid code cover the technical characteristics of the black start service in sufficient detail for the purpose of these T&Cs. We also do not believe that it is appropriate for Ofgem to have a role in approving more specific aspects of the black start service contract terms.

We therefore consider that the characteristics in the referenced sections of the Grid Code set out a complete description of the characteristics of defence and restoration services that the ESO offers to the market.

#### *b) Article 4(4)(b) - the possibility of and conditions for aggregation*

We previously asked the ESO to replace the broad references in the mapping by detailed references to the specific provisions of the Grid Code. We also asked the

ESO to define the possibility of and conditions for aggregation of defence and restoration service providers in the resubmitted T&Cs.

As a result, the ESO has proposed that specific sections of the Grid Code and of the BSC are the provisions that state the possibility of and conditions for aggregation. We understand from these references that there is two possible routes for aggregators to provide defence services:

- i) providing demand response services (i.e. a defence service) as a demand response provider. We understand that aggregators can provide demand response services by being a demand response provider. That is why the ESO proposes that DRSC1, 2 and 4 are the conditions for aggregation. In particular DRSC4 states that demand response providers *"can offer demand response services on an individual or collective basis"* i.e. as an aggregator. The Grid Code definition of demand response providers confirms this by stating that a demand response provider may be *"a third party providing demand aggregation from many individual customers"*;
- ii) providing balancing services (i.e. defence services) by bidding in to the Balancing Market (BM) as a virtual lead party (VLP). We understand that aggregators can provide balancing services via the BM. That is why ESO proposes that sections ECC/CC.6.5, BC1.4, BC1.A.10 and BC2 of the Grid Code, and sections K3.3, K8, S6.2, S6.3 and S11 of the BSC provide the possibility and conditions for aggregation. These sections of the Grid Code and BSC allow VLPs (which an aggregator can register to be) to participate in the BM. In addition, the Grid Code explicitly defines an aggregator as a BM Participant who controls one or more additional BM units or secondary BM units.

The ESO has not proposed any sections of the Grid Code or of the BSC recognising the possibility for aggregators to provide restoration services (black start services) to the ESO. We understand that the ESO proposes to maintain the current status quo where it is not possible for aggregators to provide black start services.

We note however that the ESO is currently running the Distributed ReStart project<sup>12</sup>, whose goal is to assess whether the ESO could procure black start services from

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<sup>12</sup> More information about this project can be found at the following address:  
<https://www.nationalgrideso.com/innovation/projects/distributed-restart>

distributed energy resources. As this project is funded via Ofgem's Network Innovation Competition,<sup>13</sup> the ESO will be required to present the results to us periodically and upon completion of the project. Should the results of this project be positive, and show that it will be possible for aggregators to provide restoration/black start services in the future, we would request the ESO to update the relevant GB codes to include provisions facilitating the provision by aggregators of black start services. We would then ask the ESO to incorporate these provisions within the T&Cs to act as defence/restoration providers.

*c) Article 4(4)(c) - the target geographical distribution of power sources with black start and island operation*

The ESO's proposal references the black start strategy and procurement methodologies.<sup>14</sup> We did not request amendments to this aspect of the proposal and we believe that this reference appropriately covers the requirements of Article 4(4)(c) of the NCER Regulation.

## 2) *The SGU list*

Article 4(2)(c) of the NCER Regulation require the ESO to submit the following two lists to us for approval:

- a list of SGUs that are responsible for implementing on their installations the measures that result from mandatory requirements set out in Regulations (EU) 2016/631,<sup>15</sup> (EU) 2016/1388<sup>16</sup> and (EU) 2016/1447<sup>17</sup> or from national legislation; and
- a list of the measures to be implemented by those SGUs.

We previously asked the ESO to amend the list of SGUs to include all SGUs who are subject to the mandatory requirements of the RfG, DCC and HVDC codes, including non-CUSC parties. We also asked the ESO to replace the broad references currently in the mapping of the measures to be implemented by SGUs with detailed references to the specific

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<sup>13</sup> More information about the Network Innovation Competition can be found at the following address: <https://www.ofgem.gov.uk/network-regulation-riio-model/current-network-price-controls-riio-1/network-innovation/electricity-network-innovation-competition>

<sup>14</sup> Further information on these methodologies can be found at: <https://www.nationalgrideso.com/balancing-services/system-security-services/black-start>

<sup>15</sup> Regulations (EU) 2016/631 establishing a network code on requirements for grid connection of generators (RfG code)

<sup>16</sup> Regulation (EU) 2016/1388 establishing a Network Code on Demand Connection (DCC code)

<sup>17</sup> Regulation (EU) 2016/1447 establishing a network code on requirements for grid connection of high voltage direct current systems and direct current-connected power park modules (HVDC code)



provisions of the Grid Code for compliance with Article 11(4)(c) and 23(4)(c) of the NCER Regulation.

We believe that the resubmission now fulfils the requirement of Article 4(2)(c) of the NCER Regulation as it now lists all SGUs who are subject to the obligations of the RfG, DCC and HVDC codes.<sup>18</sup> The ESO has also replaced the broad references in the previous mapping of the measures to be implemented by SGUs with detailed references to the specific provisions of the Grid Code.

### *3) The High Priority SGU list*

We previously asked the ESO to amend its proposal of High Priority SGUs or the Grid Code to ensure consistency between both documents. In line with our request, the ESO has amended its High Priority SGU list to ensure consistency between the Grid Code and the system defence/restoration plans. The ESO has now proposed the following as the High Priority SGUs:

*"Within GB, a High Priority Significant Grid User is classified as:*

- A Black Start Service Provider [in relation to the system restoration plan];*
- A Large Power Station connected directly to the National Electricity Transmission System; or*
- An Embedded Large Power Station*

*[...] the terms 'Embedded' and 'Large Power Station' have the same definition as that defined in the Grid Code"*

We understand that the special conditions that apply for disconnection and re-energisation to these large power stations are detailed in OC6.1.6. of the Grid Code. We believe that the resubmission now fulfils the requirement of Articles (4)(d) of the NCER Regulation as it now includes all SGUs who are subject to special conditions for disconnection and re-energisation.

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<sup>18</sup> We understand that there is no requirement for all SGUs to implement measures of the system defence and restoration plans, and that the ESO has some discretion to assign specific measures of the system defence plan and system restoration plan to specific SGUs. In the ESO's proposed list of measures, the ESO has only required CUSC parties to implement measures of the system defence plan and system restoration plan.

## **Next Steps**

We believe that the proposals currently reflect the obligations placed on defence and restoration service providers in GB. However, we note our intention to amend the ESO's licence conditions to introduce an Electricity System Restoration Standard in GB.<sup>19</sup> Once the licence modification process has been completed, we expect the ESO to review the T&Cs to determine if any further amendments need to be made as a consequence of our licence modifications coming into effect.

If you have any queries regarding the information contained within this letter, please contact Chris Statham at [Christopher.Statham@ofgem.gov.uk](mailto:Christopher.Statham@ofgem.gov.uk).

Yours faithfully,

Adam Gilham  
**Senior Manager ESMS**

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<sup>19</sup> Our Statutory Consultation on licence amendments to facilitate the introduction of an Electricity System Restoration Standard is available at the following address: <https://www.ofgem.gov.uk/publications/statutory-consultation-licence-amendments-facilitate-introduction-electricity-system-restoration-standard-0>