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Terms and Conditions related to Emergency and Restoration EU Network Code (amended proposal)

Dear Leonardo,

In accordance with *COMMISSION REGULATION (EU) 2017/2196 of 24 November 2017 establishing a network code on electricity emergency and restoration (NCER)*, the Transmission System Operators (TSO) of a member state are required to submit the following proposals to the relevant regulatory authority;

- the terms and conditions to act as a Defence Service Provider on a contractual basis in accordance with Article 4;
- the terms and conditions to act as Restoration Service Providers on a contractual basis in accordance with Article 4.

This obligation was assigned to National Grid as National Electricity System Operator (NGESO) in the TSO allocation dated 10 January 2018¹.

National Grid ESO submitted the proposal for NCER Article 4(4) on 18 December 2018. On 21 June 2019 Ofgem published a Request for Amendment to this proposal. The proposal could not be approved until further measures are taken to ensure clarity of the Significant Grid User (SGU) list criteria, Terms and Conditions for Restoration and Defence Providers and reconsideration of High Priority Significant Grid Users in GB.

Changes made

NGESO have considered feedback from the Regulator and updated the proposal as follows:

- a) Terms and Conditions mapping has been reviewed to only include all references that place obligations on Restoration and Defence Service Providers. The target geographical distribution of power sources for restoration providers is part of NGESO's strategy for black start procurement which is subject to Ofgem's approval.

The SGU criteria has been reviewed to ensure clarity of who is impacted and the ensuing obligations. In accordance with Articles 4.2, 4.4, 11.4(c) and 23.4(c) there is some scope for the SGU criteria to be determined on National Legislation, through Contractual terms and conditions. The general approach adopted is fundamentally that any party who is required to satisfy the requirements of the Grid Code and has a Connection and Use of System Code

¹ <https://www.ofgem.gov.uk/publications-and-updates/minded-decision-assignment-tso-obligations-under-three-eu-network-codes>

(CUSC) contract with the ESO or is a BM Participant and required to satisfy the requirements of BC1 and BC2 of the Grid Code would generally be considered to be within the Scope of NCER in GB. NGENSO owns the list of CUSC parties and BM participants, this list will be used to notify SGUs if they are affected by NCER and any measures they need to take as a result of the introduction of the NCER.

There is ongoing work to ensure distributed energy resources can provide services in a way that improves network coordination. Future changes to the industry may place more obligations on distribution connected SGUs as advised by outcomes of industry projects such as the Distributed Restoration Network Innovation Competition project, Grid Code Working Group GC0117 (Improving transparency and consistency of access arrangements across GB by the creation of a pan-GB commonality of Power Generating Module requirements) and the ENA Open Networks project that facilitates the transition of network operators from Distribution Network Operators to Distribution System Operators. This latter programme of work is planned to continue through to 2022.

- b) The High Priority SGU varies slightly between the System Defence Plan and System Restoration Plan but in general now includes Black Start Service Providers and Generators with Power Stations of 100MW or more with priority given to Synchronous plant. In accordance with guidance from Ofgem, the existing Electricity Supply Emergency Code list of protected sites are not included as they are already part of national legislation.

This letter and accompanying appendix table provides a summary of the requirements expected from Defence Service Providers and Restoration Service Providers. Where there is any conflict between this document and the service terms, the service terms shall take precedence. This letter is intended only as a general guide to the service terms.

National Grid has an obligation under the Grid Code to ensure that the National Electricity Transmission System can be re-energised in the event of a total or partial system shutdown. The likelihood of a total or partial system shutdown occurring is considered remote. However, if it is the case that should a total or partial shutdown occur anywhere on the National Electricity Transmission System, contingency arrangements must be in place to enable a timely and orderly restoration of supplies.

The need to contract for Black Start or a System Defence / Restoration procedure at an individual location will largely be driven by current arrangements at other nearby power stations, the expected longevity of such contracts and the implications involved in improving system restoration. NGENSO sets out its approach to determining and procuring an economic and efficient level of Black Start Service Provision on an ongoing basis in the Black Start Statement required under its Transmission License.

The existing Terms and Conditions for Restoration and Defence Providers for the synchronous area of Great Britain are comprised of the Balancing and Settlement Code (BSC), Grid Code and the relevant sections of the Connection and Use of System Code (CUSC). These Terms and Conditions have been created under the Electricity Act 1989 and National Grid's Transmission License. In addition, Standard Contract Terms also exist for providers of Restoration and Defence services. These balancing services are an additional set of tools which sit alongside mandatory services (as

set out in the codes) which help us to balance demand and supply and ensure security of supply across Britain's Transmission system. The National Grid Electricity System Operator (NGESO) are currently developing both new and existing balancing services products to best meet the needs of the electricity network, and Standard Contract Terms will be updated as these changes are introduced.

Since their creation, the Terms and Conditions for providers of System Defence and Restoration have been repeatedly modified to both improve their application, and to adapt to evolution within the GB Electricity market. The modification process has continually taken customer and stakeholder views into account through workshops and consultations, and in many cases through industry governance processes where modifications have been proposed by market participants to correct perceived defects. All changes are subject to robust governance processes, and where appropriate regulatory approval.

In taking this approach to the proposal for the Terms and Conditions related to Emergency and Restoration, we are following the principle set out in Ofgem's open letter of 18 December 2014 ([Implementing the Electricity EU Network Codes](#)), to only make changes to the existing framework where necessary to ensure compliance with the new Regulation.

Our proposal is that the Terms and Conditions relating to providers continue to be held in the existing frameworks and that updates required for European Network Code compliance and organic industry led changes are reflected within them. It is important that the Terms and Conditions are able to adapt as and when necessary and this approach will allow them to do so under the robust existing change processes that govern the GB frameworks.

Table 1 in Annex A is provided to help show that the existing Terms and Conditions for providers in GB meet, and are compliant with the requirements of Commission Regulation (EU) 2017/2196 (E&R) Article 4(4).

This proposal for the rules relating to the Terms and Conditions for System Restoration and Defence is expected to have a positive impact on the objectives of Emergency and Restoration as, through the requirements of the Transmission License, The Grid Code and our contractual obligations, is an objective for compliance with "the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency". The proposal aims to develop a common set of minimum requirements and principles needs to be developed for the procedures and actions to be carried out specifically when in the emergency, blackout and restoration states.

If you have any queries regarding this proposal, please contact Bernie Dolan on Bernie.Dolan@nationalgrid.com.

Yours sincerely,

Bernie Dolan

EU Codes Change Manager – National Grid Electricity System Operator

Annex 1

Mapping of E&R Article 4(4) Terms and Conditions requirements to the existing GB Electricity Market frameworks and existing Standard Contractual Terms

Please note: The terms and conditions to act as a Defence or Restoration Provider are provided within the CUSC and Grid Code. *This table provides mapping to all the obligatory requirements set out in Article 4(2)*

Article	Text	Code	Commentary
4(4)(a)	<p>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:</p> <p>(a) the characteristics of the service to be provided;</p>	<p>Grid Code sections:</p> <p>PC- Technical and design criteria for planning and development of systems.</p> <p>ECC- minimum technical, design and operational criteria (e.g. (but not solely limited to) frequency range, voltage range, reactive capability, frequency response, voltage control and fault ride through, Black Start Capability etc.) for new plant caught by the requirements of the European Connection Network Codes.</p> <p>CC - minimum technical, design and operational criteria (e.g. (but not solely limited to) frequency range, voltage range, reactive capability, frequency response, voltage control and fault ride through etc.) for existing plant not caught by the requirements of the European Connection Network Codes.</p> <p>ECP- compliance process applicable for new plant caught by the requirements of</p>	<p>Characteristics for new Type B, C or D power generating modules laid out in PC, ECC, ECP, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3, DRC.</p> <p>When the Grid Code Proposals for Storage are introduced through Grid Code Consultation GC0096, Storage will be treated as a subset of Generation and the above requirements shall apply.</p> <hr/> <p>Characteristics for existing Generating Units and Power Park Modules are laid out in PC, CC, CP, OC1, OC5, OC6, OC7, OC10, OC12, BC1, BC2, BC3, DRC.</p> <p>For Storage plant which is not caught by the requirements of Grid Code Working Group GC0096, the applicable requirements would be those specified in the</p>

		<p>the European Connection Network Codes.</p> <p>CP – compliance process applicable for existing plant not caught by the requirements of the European Connection Network Codes.</p> <p>OC1- Demand forecasting for operational purposes.</p> <p>OC5- procedures for monitoring and testing.</p> <p>OC 6- reduction of demand in the event of insufficient active power generation to meet demand.</p> <p>OC7- exchange of information in relation to operations and events that have an operational effect.</p> <p>OC9 – Contingency Planning – procedures to restore the System and associated Demand in the shortest possible time.</p> <p>OC10- procedures for reporting and investigating significant incidents.</p> <p>OC12- procedures for carrying out system tests.</p> <p>BC1- Pre-Gate Closure Process - submission of BM and system data.</p> <p>BC2- Post Gate Closure Process - Physical operation of BM units and Generating Units, particularly BC2.9 for emergency instructions and BC2.5.4 for the requirement for operation of User’s Plant</p>	<p>Bilateral Agreement. In general, most existing Storage Projects with a CUSC Contract with the ESO would be expected to meet the existing Grid Code requirements.</p> <p>Characteristics for new Transmission connected demand facilities and transmission connected closed distribution systems laid out in PC, ECC, ECP, DRSC, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3, DRC.</p> <p>Characteristics for existing Transmission connected demand facilities and transmission connected closed distribution systems laid out in PC, CC, CP, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3, DRC.</p> <p>High Priority Significant Grid Users in GB vary between the System Defence and System Restoration Plan but in general would be considered to be i) Black Start Service Providers and ii) Directly connected and Embedded Power Stations of 100MW or</p>
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		<p>and Apparatus in the absence of Emergency Instructions.</p> <p>BC3- procedures to undertake system frequency control, particularly BC3.5.2 and BC3.7.2 for Limited Frequency Sensitive Mode.</p> <p>DRC- Provision of data by User's required under the Grid Code.</p> <p>Black Start Service Contract Terms section 4.</p> <p>Black Start technical requirements and assessment criteria.</p>	<p>more with priority given to Synchronous Plant.</p> <p>As part of defence and resilience, the Demand at Power Stations should be protected to prevent loss of Generation and during the restoration phase Black Start Service Providers are the principle mechanism used to restart the Transmission system followed by Large Power Stations of 100MW or more to re-establish the System more widely.</p>
4(4)(b)	(b) the possibility of and conditions for aggregation; and	DRSC (section 4.2 - where a Demand Response Provider also has a CUSC Contract), ECC/CC 6.5, BC1, BC2, BC3	Applies to aggregators that have to satisfy these Grid Code obligations. A Demand Response Provider who is not a User or has a CUSC Contract with the ESO, would not be required to satisfy the requirements of the EU Emergency Restoration Code.
4(4)(c)	(c) for restoration service providers, the target geographical distribution of power sources with black start and island operation capabilities.	Transmission License Special Condition 4G- Black start strategy and procurement methodology.	<p>Special Condition 4G doesn't place obligations on NGESO to achieve a geographical distribution of Black Start capabilities.</p> <p>As a prudent System Operator, our Black Start Strategy, agreed with Ofgem annually, divides the country into six zones and NGESO</p>

			<p>aim to procure up to three services in each zone.</p> <p>The planning assumption for the minimum service level is set at 24hours for 60% of the national demand to be restored.</p>
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