nationalgridESO

NCER: System Restoration Plan

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Contents

NCER: System Restoration Plan

1 Introduction

The *Network Code on Emergency & Restoration*[1] (***NCER***) came into force on 18 December 2017. Pursuant to the provisions in Chapter 3 below is the proposed System Restoration Plan on behalf of the GB National Electricity Transmission System Operator (NGESO).[2]

As provided for in the NCER Article 23, this System Restoration Plan will be designed in consultation with relevant Distribution System Operators (DSOs), Significant Grid Users (SGUs), National Regulatory authorities, neighbouring Transmission System Operators (TSOs) and other TSOs in the GB synchronous area.

This Plan is not intended to replace any provisions currently in place in the GB Codes nor to amend the Operational Security Limits[3], it is a summary of how the requirements for System Restoration specified in NCER will be satisfied. Many of the provisions contained within this System Restoration Plan are already described in the GB national codes (Grid Code, CUSC, BSC, etc.). Where there are new mandatory requirements for GB Parties then these will be included in relevant GB Codes as appropriate.

This System Restoration Plan will impact all TSOs, and DSOs in Great Britain. The NCER also defines the term Significant Grid Users (SGU's) and Restoration Service Providers. These terms are defined in Appendix G of this document.

For the avoidance of doubt, the ESO, Transmission Licensees and Distribution Network Operators (including Independent Distribution Network Operators) are not classified as Significant Grid Users (SGU) though they are required to satisfy the requirements of the NCER.

In complying with the requirements of the Grid Code, System Operator Transmission Owner Code (STC) and Distribution Code (as applicable), the ESO, Transmission Licensees, Distribution Network Operators (including Independent Distribution Network Operators) would be considered to satisfy the requirements of NCER,

This System Restoration Plan has been developed taking the following into account:

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[1] *Network Code on Emergency and Restoration* http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2017.312.01.0054.01.ENG&toc=OJ:L:2017:312:TOC

[2] *National Electricity Transmission System Operator – this term is used to incorporate all communication routes – specific procedures and platforms will channel communications to the appropriate teams, e.g. National Grid ENCC in real time or National Grid Network Access Planning team, ahead of time.*

[3] *Article 25 System Operations Guideline* *http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2017.220.01.0001.01.ENG*

- The behaviour and capabilities of load and generation
- The specific needs of the high priority significant grid users detailed in Appendix C
- The characteristics of the National Electricity Transmission System and of the underlying DSO systems.
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In addition, and as required under the NCER, the ESO will notify (in writing) Transmission Licensee's, Network Operators and GB Significant Grid User's (GB SGU's) if they are affected by the NCER and any measures they need to take as a result of the introduction of the NCER.

2 System Restoration Plan Overview

The EU Network Code on Emergency and Restoration (NCER) aims to ensure security and continuity of electricity supply across Europe by creating harmonised standards and procedures to be applied in the Emergency, Blackout and Restoration system state(s). This code requires the development of a System Restoration Plan in advance of such an event specifying measures related to information exchange, operational procedures and post-event analysis.

NCER sits alongside the Transmission System Operation Guideline[4] (SOGL) which sets out harmonised rules on system operation and identifies different critical system states (Normal State, Alert State, Emergency State, Blackout State and Restoration).

This System Restoration Plan consists of the technical and organisational measures necessary for the restoration of the electricity system in Great Britain from a Partial or Total Shutdown to the defined Normal State, taking into account Significant Grid Users (SGU) capabilities (including Embedded SGUs), External Interconnections and the operational constraints of the Total System.

The main objectives of this plan include

1. To achieve the Re-Synchronisation of parts of the Total System which have become Out of Synchronism.
2. To ensure that communication routes and arrangements are available to enable representatives of the TSOs, DSOs and SGUs, who are authorised to make binding decisions on behalf of the TSO, DSO or the relevant SGU, as the case may be, to communicate with each other when this System Restoration Plan is active.
3. To describe the role that in respect of TSOs, DSOs, RSPs and/or SGUs may have in the restoration processes as detailed in the relevant De-Synchronised Island Procedures (DIP's) and Local Joint Restoration Plans (LJRPs).
4. To identify and address as far as possible the events and processes necessary to enable the restoration of the Total System in GB to a Normal State, after a Total Shutdown or Partial Shutdown. This is likely to require the following key processes to be implemented, typically, but not necessarily, in the order given below:

    - Selectively implement Local Joint Restoration Plans;
    - Expand Power Islands to supply non Black Start Power Stations;
    - Selectively reconnect demand;
    - Expand and merge Power Islands leading to Total System energisation;

[4] *https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R1485&from=EN*

- Facilitate and co-ordinate returning the Total System back to normal operation; and
- Resumption of the market arrangements if suspended in accordance with the relevant codes.

2.1 Activation of System Restoration Plan

In Accordance with NCER Article 25:

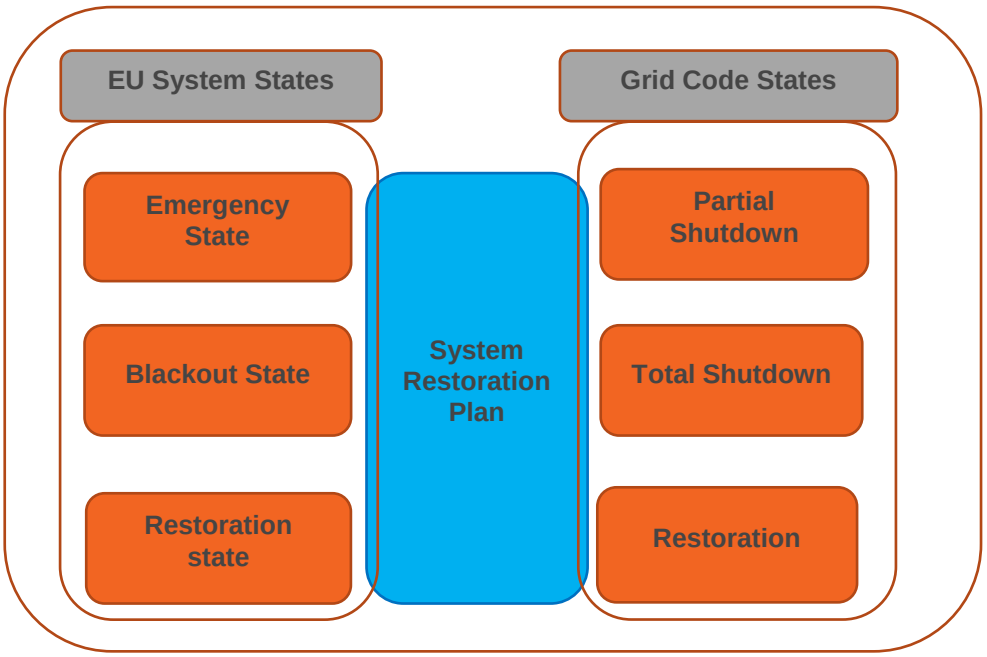
2.1.1 Procedures in this System Restoration Plan can be activated when the System is in Emergency state and activated procedures of the System Defence Plan have taken place, or will be activated when the System is in the Blackout state.

2.1.2 Procedures in this System Restoration Plan will be activated by the NGESO in coordination with DSOs, SGUs and Restoration Service Providers.

2.1.3 All instructions issued by the NGESO under this System Restoration Plan must be executed by each DSO, SGU and Restoration Service Provider without undue delay.

2.1.4 The NGESO will manage remedial actions that involve actions from other TSOs.

2.1.5 The SRP can be activated, and remain active, through the Emergency, Blackout and Restoration states as shown below.



2.1.6 Activation of the SRP in GB will occur once the NGESO determines and informs the BSCCo that either a Total Shutdown or a Partial

Shutdown exists and subsequent Black Start instructions are required for restoration.

2.1.7 Market Suspension (*NCER Article 35 part 1*) occurs in GB where the Market Suspension threshold conditions as detailed in *BSC G-3.1.5* (that is, under 5% of demand having been lost) has been met. If the Market Suspension threshold has been met, then Market Suspension will occur in GB. Both scenarios can occur within the Emergency State.

2.1.8 The trigger threshold for the GB system Blackout State shall be maintained as per the current definition of a Partial or a Total System Shutdown *Grid Code OC9.4.1*.

3 System Restoration Plan Procedures

Grid Code OC9.4. documents the procedure of recovery from a Total or Partial Shutdown. This allows for a top-down (energisation from other TSOs) and bottom-up (within TSO area energisation) restoration approach strategies. Detailed within this are the specific procedures referenced in NCER as:

- Re-energisation procedure *(NCER Article 26 Section 2)*
- Re-synchronisation procedure *(NCER Article 33 Section 4)*
- Frequency management procedure

3.1 Re-energisation procedure

3.1.1 The *Grid Code OC 9.2.5* identifies the key processes to be implemented in GB to enable the restoration of the Total System following a Total or Partial Shutdown as:

- Selectively implement Local Joint Restoration Plans;
- Expand Power Islands to supply Power Stations;
- Selectively reconnect Demand;
- Expand and merge Power Islands leading to Total System energisation;
- Facilitate and co-ordinate returning the Total System back to normal operation; and
- Resumption of the Balancing Mechanism if suspended in accordance with the provisions of the BSC.

3.1.2 In order to deliver this restoration contractual arrangements for Restoration Service Providers and documented restoration plans are in place as permitted through *Grid Code OC9* provisions.

3.1.3 The bilateral procurement of Black Start service provision is carried out by the NGESO. Following a commercial contract being established and commenced, the RSP, relevant TSO, local DSO and NGESO create, in line with *Grid Code OC9.4.7.12*, an LJRP.

3.1.4 Operation of these LJRPs follows *Grid Code OC9.4.7.6*. Each individual LJRP document provides specific details of how an individual RSP is to be started and block loaded to create a stable Power Island. These plans provide guidance to TSO staff to assess the status of operational equipment and systems, within a shutdown situation, and identify the organisational and process changes necessary to enable an effective restoration. They also identify the split in responsibilities between the relevant TSO(s) and relevant DSO, together with the appropriate communication channels.

3.1.5 Changes, amendments and the creation of new LJRPs is detailed in *Grid Code OC9.4.7.12* including the exercising of these plans.

3.1.6 In the LJRP stage of restoration the voltage and frequency management is undertaken by the specific RSP within that Power

Island. Once an additional party (either another provider or DSO) is involved in the Power Island the voltage and frequency management control reverts to the NGESO. At this point the NGESO directs the relevant TSO to expand the network in line with routes identified in the Skeleton Network.

3.1.7 The Skeleton Network indicates key routes for growing individual power islands, once stable and having developed a level of circuit security, to enable supplies to be given to further SGUs, other Power Islands and subsequently to create a single, synchronous power system.

3.1.8 During the re-energisation process the resynchronisation and frequency management procedures detailed within this System Restoration Plan are adhered to.

3.2 Re-synchronisation procedure

3.2.1 NCER Article 33 Section 4 requires the appointment of a resynchronisation leader. For the purpose of GB NETS restoration, the NGESO takes on the role of resynchronisation leader, as overall coordinator of the restoration procedure unless alternative arrangements are specified (as currently exist in Scotland under STCP 06-1 - the System Operator Transmission Owner Code Procedure on Black Start). *Grid Code OC9.5.6* outlines the requirements for the Re-synchronisation of De-Synchronised Islands following a Total or Partial Shutdown.

3.2.2 Following any shutdown, the re-energisation procedure requires that several Power Islands are created and expanded with the objective of creating the Skeleton Network to grow to reach available generation and demand. The Skeleton Network is then expanded until all demand, generation and appropriate circuits have been restored. It will, therefore, be necessary to interconnect Power Islands. The complexities and uncertainties of recovery from a Total or Partial Shutdown requires that provisions under this section to be flexible, however, the actions taken when Re-synchronising De-synchronised Islands following any Total Shutdown or Partial Shutdown, will include the following: (a) the provision of supplies to appropriate Power Stations to facilitate their synchronisation as soon as practicable; (b) energisation of a skeletal National Electricity Transmission System; and (c) the strategic restoration of Demand in co-ordination with relevant DSOs.

3.2.3 Re–synchronisation of a Power Island is performed by arming and closing a synchronising breaker at the substation joining both Power Islands. The Power System Synchroniser setting is in place to ensure safe closure of the open circuit breaker which is live on both sides. This is designed to synchronise two electrically separate systems which are running at slightly different frequencies with the two voltages across the

open circuit breaker contacts cyclically passing in and out of phase with each other.

3.2.4 The requirement for the Power System Synchroniser is to ensure the phase angle between voltages is practically zero and the voltage magnitudes and difference in frequency or slip is within pre-set limits. Once the synchronisation command has been executed, the Power System Synchroniser circuit breaker will remain armed for a period of time to allow system conditions to be suitably altered (one frequency driven towards the other by issuing Target Frequency instructions to generators within one power island) to allow the synchronising relay to close the selected circuit breaker. Should the conditions not be met then the instruction will time out and circuit breaker re-selection and execution of the instruction must be repeated.

3.2.5 The location of Power System Synchroniser circuit breaker facilities are documented within the relevant TSO's internal procedures and are indicated on NGESO's situational awareness displays.

3.2.6 The setting policy for synchronising relays is common across all three onshore TSO areas in GB, and are:

- System synchronising slip 0.125Hz
- System synchronising closing angle 10deg
- Under voltage setting 0.85pu

3.2.7 During a Total Shutdown or Partial Shutdown and during the subsequent recovery, the (Transmission) Licence Standards may not apply and the Total System may be operated outside normal Voltage and Frequency standards.

3.2.8 In a Total Shutdown and during the subsequent recovery, all instructions issued by the relevant TSO (unless specified otherwise) are deemed to be Emergency Instructions under *BC2.9.2.2 (iii)* and need not be prefixed with the words "This is an Emergency Instruction".

3.2.9 In a Partial Shutdown and during the subsequent recovery, all instructions issued by the relevant TSO in relation to RSPs and DSOs which are part of an invoked LJRP will (unless specified otherwise) are deemed to be Emergency Instructions under *BC2.9.2.2(iii)* and need not be prefixed with the words "This is an Emergency Instruction".

3.3 Frequency management procedure

3.3.1 NCER Section 3 Article 29 requires the appointment of a frequency leader during system restoration when a synchronous area is split in several synchronised regions. For the purpose of GB NETS restoration, the NGESO takes on the role of frequency leader except in situations where it is delegated in Scotland in accordance with STCP-06-1.

3.3.2 Frequency management during system restoration falls into two phases; the LJRP phase and the Skeleton Network phase. The NGESO remains the frequency leader in both these phases (unless

the role, as currently provided for in Scotland, has been delegated to another Transmission Licensee as defined under STCP-06-1) and both phases can be in force simultaneously as new LJRPs are instructed and form power islands whilst the Skeleton Network is being restored.

3.3.3 Frequency Management during LJRP Phase

During the LJRP phase, the NGESO will instruct the implementation of required LJRPs and the required Target Frequency. As detailed within the LRJP; demand blocks will be added in line with the requirements of the RSP to establish a power island. The RSP's will configure their governor to act in "free governor action" mode to aid in frequency control. During the period when only one RSP is connected to the Power Island the frequency is controlled by the RSP in co-ordination with the relevant TSO and or relevant DSO who will also add or remove demand as the RSP requires to maintain Target Frequency.

During this period, the RSP will be required to regulate their output in co-ordination with the relevant TSO and /or relevant DSO to the existing and newly connected demand in the Power Island. The relevant TSO and /or relevant DSO and RSP will communicate so demand and generation are matched to maintain (where practicable) the Target Frequency. Demand will be added to the Power Island as more generation becomes available.

3.3.4 Frequency Management during the Skeleton Network Phase

The Skeleton Network phase begins when a second or subsequent SGUs are added to the Power Island. The relevant TSO may issue new Target Frequency instructions to RSPs and in co-ordination with available generation informs the relevant TSO and/or relevant DSO of the size of power blocks required to be added or removed from the Power Island to maintain generation stability.

Power Islands will be synchronised to each other using suitable system synchroniser circuit breakers. The frequency of each Power Island will be matched (both controlled by the relevant TSO), the power system synchroniser breaker will automatically synchronise the power island. Subsequent Power Island will be synchronised in a similar way.

The relevant TSO will determine power block size to be added or removed from the power island to maintain energy balancing and power island frequency. Power Stations & RSPs will be instructed by the relevant TSO. All Power Stations who

resume operation in a Restoration State will remain in Frequency Sensitive Mode until Normal State is achieved, or instructed otherwise by NGESO.

4 System Restoration to Normal State operation

4.1 In GB, a Black Start restoration will be deemed to be completed when either:

Normal Market operations have resumed and the Market Suspension is no longer in force (the Balancing Mechanism resumes normal operation) as determined by the BSC Panel;

or

The end of the settlement period when NGESO determines (and notifies BSCCo that the system is back in normal operation).

4.2 *Grid Code OC9.4.7.9* describes the considerations to be made by NGESO before declaring that the Total System could return to normal operation:

- the extent to which the GB NETS is contiguous and energised;
- the integrity and stability of the GB NETS and its ability to operate in accordance with the (Transmission) Licence Standards;
- the impact that returning to a Normal State may have on transmission constraints and the corresponding ability to maximise the Demand connected;
- the volume of Generation or Demand not connected to the GB NETS; and
- the functionality of normal communication systems (i.e. electronic data communication facilities, Control Telephony, etc.).

4.3 Once NGESO deems that sufficient confidence in the Transmission System, connected generation and demand and appropriate systems are in place to return to normal operation they will inform BSCCo of this development.

5 System Restoration Plan Implementation

5.1 Article 24 of *the NCER,* provides for the implementation of the **System Restoration Plan** and requires that by the 18 December 2018 the NGESO will notify all DSOs, SGUs and Restoration Service Providers of their obligations.

5.2 This System Restoration Plan will be fully implemented by 18 December 2019.

6 Plan Review

6.1 NCER Article 51 requires the NGESO to review the measures of the System Restoration Plan using computer simulation tests to assess effectiveness at least every five years. These requirements are part of existing ESO procedures and black start strategy which are reviewed by Ofgem under Licence Conditions. Obligations on DSOs and other SGUs are in accordance with the LJRP requirements and operational tests for service providers. The processes are documented internally for ESO and in the Grid Code and Black Start Service Contract Terms.

6.2 The review will cover:

- Simulating the establishment of the Skeleton Network using RSPs with Black Start capability;
- Demand reconnection process;
- Process for resynchronisation of Power Islands; and
- Learning from operational testing as per the testing procedure

6.3 Operational testing of the System Restoration Plan will be in line with the Assurance and Compliance Testing requirements within the System Defence Plan.

6.4 The NGESO will review the System Restoration Plan to assess its effectiveness at least every five years.

6.5 The NGESO will also review the relevant measures of the System Restoration Plan in advance of a substantial change to the configuration of the National Electricity Transmission System.

6.6 Any substantive changes identified in the review of the System Restoration Plan will be captured via published updates to this document.

Appendix A: Criteria for the SGUs Responsible for Implementing Measures that Result from EU Code Mandatory Requirements

NCER Article 2.1 – Article 2.8 defines which parties are required to satisfy the requirements of the NCER and Article 23.4 defines which of these parties are required to satisfy the requirements of the System Restoration Plan. The NCER introduces the definition of a Significant Grid User (SGU) which in addition to TSO's and DSO's (which themselves are not classified as SGU's), are those parties who would be required to satisfy the requirements System Restoration Plan. The list below is an extract from Article 2 and 23.4(c) and 34.4(d) of the NCER as to which parties are considered as SGU's.

Extract from NCER Articles 2.1 – 2.8

1. "This Regulation shall apply to TSOs, DSOs, SGUs, defence service providers, restoration service providers, balance responsible parties, balancing service providers, nominated electricity market operators ('NEMO') and other entities designated to execute market functions pursuant to Commission Regulation (EU) 2015/1222 and to Commission Regulation (EU) 2016/1719.

2. In particular, this Regulation shall apply to the following SGUs:

(a) existing and new power generating modules classified as type C and D in accordance with the criteria set out in Article 5 of Commission Regulation (EU) 2016/631

(b) existing and new power generating modules classified as type B in accordance with the criteria set out in Article 5 of Regulation (EU) 2016/631, where they are identified as SGUs in accordance with Article 11(4) and Article 23(4);

(c) existing and new transmission-connected demand facilities;

(d) existing and new transmission connected closed distribution systems;

(e) providers of redispatching of power generating modules or demand facilities by means of aggregation and providers of active power reserve in accordance with Title 8 of Regulation (EU) 2017/1485; and

(f) existing and new high voltage direct current ('HVDC') systems and direct current-connected power park modules in accordance with the criteria set out in Article 4(1) of Commission Regulation (EU) 2016/1447.

3. This Regulation shall apply to existing and new type A power generating modules, in accordance with the criteria set out in Article 5 of Regulation (EU) 2016/631, to existing and new type B power generating modules other than those referred to in paragraph 2(b), as well as to existing and new demand facilities, closed distribution systems and third parties providing demand response where they qualify as defence service providers or restoration service providers pursuant to Article 4(4).

4. Type A and type B power generating modules referred to in paragraph 3, demand facilities and closed distribution systems providing demand response may fulfil the requirements of this Regulation either directly or indirectly through a third party, under the terms and conditions set in accordance with Article 4(4).

5. This Regulation shall apply to energy storage units of a SGU, a defence service provider or a restoration service provider, which can be used to balance the system, provided that they are identified as such in the system defence plans, restoration plans or in the relevant service contract.

6. This Regulation shall apply to all transmission systems, distribution systems and interconnections in the Union except transmission systems and distribution systems or parts of the transmission systems and distribution systems of islands of Member States of which the systems are not operated synchronously with Continental Europe, Great Britain, Nordic, Ireland and Northern Ireland or Baltic synchronous area, provided that this non-synchronous operation does not result from a disturbance.

7. In Member States where more than one transmission system operator exists, this Regulation shall apply to all transmission system operators within that Member State. Where a transmission system operator does not have a function relevant to one or more obligations under this Regulation, Member States may provide that the responsibility for complying with those obligations is assigned to one or more different, specific transmission system operators.

8. The TSOs of Lithuania, Latvia and Estonia are, as long as and to the extent that they are operating in a synchronous mode in a synchronous area where not all countries are bound by Union legislation, exempted from the application of Articles 15, 29 and 33, unless otherwise provided for in a cooperation agreement with third country TSOs constituting the basis for their cooperation concerning secure system operation in accordance with Article 10".

Extract from Articles 23.4(c) and 23.4(d)

"(c) a list of the SGUs responsible for implementing on their installations the measures that result from the mandatory requirements set out in Regulation (EU) 2016/631, (EU) 2016/1388 and (EU) 2016/1447 or from national legislation and a list of the measures to be implemented by those SGUs;

(d) a list of high priority significant grid users and the terms and conditions for their disconnection, and renergisation…."

Each of the Regulation references above (for example Commission Regulation or Regulation 2016/631 which in this example is Commission Regulation (EU) 2016/631 of the 14th April 2016 establishing a Network Code on Requirements of Generators) are referenced the Glossary (Appendix E of this document).

Significant Grid User (SGU) is a term introduced under the suite of European Network Codes and until now has not been used in the GB arena. To address this issue, Appendix B of this document translates the above SGU list so it is clear which new and existing GB parties would be considered to be within the scope of the NCER and hence the criteria under which a GB party would be within the scope of the NCER. The NGESO, will update this criteria as part of its review of the System Restoration Plan.

For the avoidance of doubt, the GB suite of Industry Codes and documents will be updated so that GB parties complying with the GB Industry Codes and documents will automatically comply with the requirements of the NCER.

Appendix B: GB Parties within the scope of the System Restoration Plan

Appendix A of this document defines which parties are required to satisfy the requirements of the NCER. The NCER however defines these requirements in terms of Significant Grid User's (SGUs) and Restoration Service Providers which is a new term introduced through the suite of European Network Codes rather than an approach which has previously been used in GB. The purpose of this Appendix is therefore to define which GB parties would fall within the scope of the NCER.

Article 4.2, 4.4 and 23.4(c) and (d) of NCER detail the Regulatory and design measures of the System Restoration Plan. An extract from NCER Article 4.2 and 4.4 is listed below. Extracts from NCER Article 23.4(c) and (d) is listed in Appendix A.

Extract from NCER Articles 4.2 and 4.4.

Article 4.2

"2. Each TSO shall submit the following proposals to the relevant regulatory authority in accordance with Article 37 of Directive 2009/72/EC for approval:

(a) the terms and conditions to act as defence service providers on a contractual basis in accordance with paragraph 4;

(b) the terms and conditions to act as restoration service providers on a contractual basis in accordance with paragraph 4;

(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);

(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.

(e) the rules for suspension and restoration of market activities in accordance with Article 36(1);

(f) specific rules for imbalance settlement and settlement of balancing energy in case of suspension of market activities, in accordance with Article 39(1);

(g) the test plan in accordance with Article 43(2)".

Article 4.4

"4. 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:

(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."

Based on the above criteria, 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 the satisfy the requirements of the Grid Code and has a CUSC contract with the ESO or is a BM Participant and required to satisfy the requirements of the BC1 and BC 2 of the Grid Code would generally be considered to be within the Scope of NCER.

In GB, Restoration Service Providers and GB Significant Grid Users (GB SGU's) would fall within the scope of the System Restoration Plan.

Restoration Service Providers would include GB Significant Grid User's and Black Start Service Providers. A list of GB Significant Grid User's is detailed in Table B1 below.

For the purposes of GB, Restoration Service Providers and GB Significant Grid Users are both defined in Appendix G of this document.

EU Criteria	New or Existing	List of GB Significant Grid User's (GB SGU's)	Measures of the System Restoration Plan	Comments
Existing and new Power Generating modules classified as Type C and D in accordance with the criteria set out in Article 5 of Commission Regulation (EU) 2016/631	New	Any Generator who is an EU Code User who has a CUSC Contract with the ESO and owns or operates a Type C or Type D Power Generating Module	Applicable Grid Code requirements: PC, ECC, ECP, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3*, DRC In satisfying the above Grid Code requirements, Generators with a CUSC Contract who own or operate a Type C or Type D Power Generating Module would meet one or more of the requirements of the System Restoration Plan.	BC 3* applies to Large Power Stations and directly connected Power Stations. The requirements for LFSM-O are covered in ECC.6.3.7.1.
	Existing	Any Generator who is a GB Code User who has a CUSC Contract with the ESO	Applicable Grid Code requirements: PC, CC, CP, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3*, DRC Generators with a CUSC Contract would need to comply with the applicable requirements of the Grid Code and in doing so would satisfy one or more	BC 3* applies to Large Power Stations and directly connected Power Stations. The requirements for LFSM-O are covered in ECC.6.3.7.1.

EU Criteria	New or Existing	List of GB Significant Grid User's (GB SGU's)	Measures of the System Restoration Plan	Comments
			measures of the System Restoration Plan.	
Existing and new power generating modules classified as Type B in accordance with the criteria set out in Article 5 of Regulation (EU) 2016/631, where they are identified as SGU's in accordance with Article 11(4)	New	Any Generator who is a EU Code User and has a CUSC Contract with the ESO and owns or operates a Type B Power Generating Module	Applicable Grid Code requirements: PC, ECC, ECP, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3*, DRC In satisfying the above Grid Code requirements, Generators with a CUSC Contract who own or operate a Power Station comprising a Type B Power Generating Module would meet one or more of the requirements of the System Restoration Plan.	As the Generator has a CUSC contract and obliged to satisfy the requirements of the Grid Code, then such parties would be within the scope of NCER. BC 3* applies to Large Power Stations and directly connected Power Stations.
	Existing	Any Generator who is a GB Code User and who has a CUSC Contract with the ESO	Applicable Grid Code requirements: PC, CC, CP, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3*, DRC In satisfying the above Grid Code requirements, Generators with a CUSC Contract would meet one	As the Generator has a CUSC contract and obliged to satisfy the requirements of the Grid Code, then such parties would be within the scope of NCER. BC 3* applies to Large Power Stations and directly connected Power Stations.

EU Criteria	New or Existing	List of GB Significant Grid User's (GB SGU's)	Measures of the System Restoration Plan	Comments
			or more of the requirements of the System Restoration Plan.	
Existing and new Transmission-connected demand facilities	New	Any Non-Embedded Customer who is an EU Code User and who has a CUSC Contract with the ESO	Applicable Grid Code requirements: PC, ECC, ECP, DRSC*, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3*, DRC In satisfying the above Grid Code requirements, Non-Embedded Customers would meet one or more of the requirements of the System Restoration Plan.	BC 3* and the DRSC* would also apply if the Non-Embedded Customer provided Ancillary Services.
	Existing	Any Non-Embedded Customer who is a GB Code User and has a CUSC Contract with the ESO	Applicable Grid Code requirements: PC, CC, CP, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3*, DRC In satisfying the above Grid Code requirements, Non-Embedded Customers would meet one or more of the requirements of the System Restoration Plan.	BC 3 would apply if the Non-Embedded Customer provided Ancillary Services.

EU Criteria	New or Existing	List of GB Significant Grid User's (GB SGU's)	Measures of the System Restoration Plan	Comments
Existing and new Transmission Connected Closed Distribution Systems	New	Any Non-Embedded Customer who is an EU Code User and who has a CUSC Contract with the ESO	Applicable Grid Code requirements: PC, ECC, ECP, DRSC*, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3*, DRC In satisfying the above Grid Code requirements, Non-Embedded Customers would meet one or more of the requirements of the System Restoration Plan.	The Closed Distribution System is considered as a Private Network and not registered as a Network Operator or IDNO. The DRSC and BC3 would apply if the Non-Embedded Customer provided Ancillary Services.
	Existing	Any Non-Embedded Customer who is a GB Code User and which has a CUSC Contract with the ESO	Applicable Grid Code requirements: PC, CC, CP, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3*, DRC In satisfying the above Grid Code requirements, Non-Embedded Customers would meet one or more of the requirements of the System Restoration Plan.	The Closed Distribution System is considered as a Private Network and not registered as a Network Operator or IDNO

EU Criteria	New or Existing	List of GB Significant Grid User's (GB SGU's)	Measures of the System Restoration Plan	Comments
Providers of redispatching of power generating modules or demand facilities by means of aggregation and providers of active power reserve in accordance with Title 8 of Regulation 2017/1485	New & Existing	BM Participants	(ECC/CC 6.5 only) DRSC*, BC1, BC2, BC3*	In general, a BM Participant will also be a User and in this case, they would be caught by the requirements of NCER. Users can fall into different categories and these are detailed above. A BM Participant who is not defined as a User (such as an Aggregator) will have to satisfy the requirements of BC1 and BC2 and ECC/CC.6.5, and therefore would be considered to meet one or more requirements under the System Restoration Plan. A BM Participant who also satisfies the requirements of the DRSC (ie they offer Ancillary Services and caught by the requirements of DCC (ie EU Code User's) may also have to satisfy the requirements of BC3 but this would depend on the type of Ancillary Service offered. In all cases a BM Participant would be treated as having to meet the requirements of NCER.
Existing and new high voltage direct current (HVDC) Systems and direct current connected Power Park Modules in	New	HVDC System Owners and Generators in respect of Transmission DC Converters and/or DC	Applicable Grid Code requirements: PC, ECC, ECP, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3*, DRC	BC 3* applies to HVDC System Owners. The requirements for LFSM-O for HVDC Systems and DC Connected Power Park Modules are covered in ECC.6.3.7.1.

EU Criteria	New or Existing	List of GB Significant Grid User's (GB SGU's)	Measures of the System Restoration Plan	Comments
accordance with the criteria set out in Article 4(1) of commission Regulation (EU) 2016/1447		Connected Power Park Modules who are EU Code Users and have a CUSC Contract with the ESO	In satisfying the above Grid Code requirements, HVDC System Owners and Generators in respect of DC Connected Power Park Modules with a CUSC Contract would meet one or more of the requirements of the System Restoration Plan.	
	Existing	DC Converter Station Owners and Generators in respect of Transmission DC Converters who are GB Code Users and have a CUSC Contract with the ESO	Applicable Grid Code requirements: PC, CC, CP, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3*, DRC In satisfying the above Grid Code requirements, DC Converter Station Owners with a CUSC Contract would meet one or more of the requirements of the System Restoration Plan.	BC 3* applies to DC Converter Station Owners

Existing and new Type A Power Generating Modules in accordance with the criteria set out in Article 5 of Regulation (EU) 2016/631, to existing and new Type B Power Generating Modules other than those referred to in paragraph 2(b), as well as to existing and new demand facilities, closed distribution systems and third parties providing demand response where they qualify as Restoration Service	New	Any Generator who is an EU Code User and has a CUSC Contract with the ESO and owns or operates a Type A Power Generating Module. Non Embedded Customers and BM Participants in respect of Closed Distribution Systems and Aggregators.	Applicable Grid Code requirements: PC, ECC, ECP, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3*, DRC In satisfying the above Grid Code requirements, Generators with a CUSC Contract who own or operate a Power Station comprising a Type A Power Generating Module would meet one or more of the requirements of the System Restoration Plan in the same way as a Generator who owns or operates a Type B Power Generating Module.	As the Generator has a CUSC contract and obliged to satisfy the requirements of the Grid Code, then such parties would be within the scope of NCER. BC 3* applies to Large Power Stations and directly connected Power Stations. Type A Power Generating Modules are required to satisfy the requirements of ECC.6.3.7.1 (LFSM-O).

Providers pursuant to Article 4(4)				

EU Criteria	New or Existing	List of GB Significant Grid User's (GB SGU's)	Measures of the System Restoration Plan	Comments
Existing and new Type A Power Generating Modules in accordance with the criteria set out in Article 5 of Regulation (EU) 2016/631, to existing and new Type B Power Generating Modules other than those referred to in paragraph 2(b), as well as to existing and new demand facilities, closed distribution systems and third parties providing demand	Existing	Any Generator Registered as a GB Code User which has a CUSC Contract with the ESO and owns or operates a Generating Unit or Power Park Module and is required to satisfy the requirements of the Grid Code Non-Embedded Customers and BM Participants in respect of Closed Distribution Systems and Aggregators.	Applicable Grid Code requirements: PC, CC, CP, OC1, OC5, OC6, OC7, OC9, OC10, OC12, BC1, BC2, BC3*, DRC In satisfying the above Grid Code requirements, Generators with a CUSC Contract would meet one or more of the requirements of the System Defence Plan.	As the Generator has a CUSC contract and obliged to satisfy the requirements of the Grid Code, then such parties would be within the scope of NCER. BC 3* applies to Large Power Stations and directly connected Power Stations.

EU Criteria	New or Existing	List of GB Significant Grid User's (GB SGU's)	Measures of the System Restoration Plan	Comments
response where they qualify as Restoration Service Providers pursuant to Article 4(4)				
Type A and Type B Power Generating Modules referred to in paragraph 3, demand facilities and closed distribution systems providing demand response may fulfil the requirements of this Regulation either directly or indirectly through	New and Existing	BM Participants	BC1, BC2, (ECC/CC.6.5 applies only)	This is a non-mandatory requirement. If a BM Participant owns or operates a Type A or Type B Power Generating Module, this would fall under the requirements of RfG. They would also need to comply with the requirements of BC1 and BC2 and therefore fall under the scope of NCER. If the party is also a EU Code User, the wider requirements of the Grid Code would apply (ie ECC's, ECP's and OC's would also apply in which case they would also considered to be within the scope of NCER. If an existing BM Participant owns or operates a Small Power Station they would need to meet the requirements of BC, BC2 and CC.6.5. They would be treated as being within the scope of NCER. If an Aggregator registered as a BM Participant has generation and/or demand and required to meet the requirements of the

EU Criteria	New or Existing	List of GB Significant Grid User's (GB SGU's)	Measures of the System Restoration Plan	Comments
a third party under the terms and conditions set out in accordance with Article 4(4)				applicable Balancing Codes, this would also fall under the requirements of NCER

EU Criteria	New or Existing	List of GB Significant Grid User's (GB SGU's)	Measures of the System Restoration Plan	Comments
This Regulation shall apply to energy storage units of a SGU, a defence service provider or Restoration Service Provider which can be used to balance the system, provided that they are identified as such in the system defence plans restoration plans or service contract.	New	Any EU Code Generator which has a CUSC Contract with the ESO and which owns and operates Electricity Storage Modules would be classified as a Storage User as defined under the GC0096 Grid Code proposals	Applicable Grid Code requirements: PC, ECC, ECP, OC1, OC5, OC6 (in particular OC6.6), OC7, OC9, OC10, OC12, BC1, BC2, BC3*, DRC Under the GC0096 proposals, Electricity Storage Modules are treated in the same way as Power Generating Modules. Generators who have a CUSC Contract with the ESO who own and/or operate Electricity Storage Modules would therefore be within the scope of NCER.	Under the GC0096 proposals, when a Storage Plant is in an importing mode of operation, and the System Frequency falls automatic tripping is required in accordance with the requirements of OC6.6. Within GB, the capability to switch from import to export during low system frequency conditions is not required. Tripping will be initiated prior to the start of Low Frequency Demand Disconnection which occurs at 48.8Hz. All the other requirements of the Grid Code apply and therefore Storage Units caught under the proposed requirements of GC0096 would be considered to be within the scope of NCER.
	Existing	Any CUSC Party who owns or operates Storage plant	Applicable Grid Code requirements: PC, CC, CP, OC1, OC5, OC6, OC7, OC10, OC12, BC1, BC2, BC3*, DRC	A CUSC Party owning a Storage plant would be required to satisfy the requirements of the Grid Code and hence would be considered to be within the scope of NCER. The technical requirements applicable to the storage plant including the ability to trip during low system frequencies will be as specified in the Bilateral Agreement.

Table B1- GB SGU's

For the avoidance of doubt the following GB Parties below would not be required to satisfy the requirements of NCER.

- Any Embedded Generator in respect of a Medium or Small Power Station which does not have a CUSC Contract the ESO.
- Any Generator in respect of a Licence Exempt Embedded Medium Power Station (LEEMPS).
- A Demand Response Provider who does not have a CUSC Contract with the ESO
- Any HVDC System Owner or DC Converter Station Owner or Generator who owns and operates an HVDC System or DC Converter Station or Transmission DC Converter or DC Connected Power Park Module which does not have a CUSC Contract or Interconnector Agreement with the ESO.
- BM parties that are not required to meet the requirements of BC1, BC2 and CC.6.5 or ECC.6.5.

For the avoidance of doubt, the ESO, Transmission Licensees and Distribution Network Operators are not classified as Significant Grid Users (SGU) though they are required to satisfy the requirements of the NCER.

Appendix C: List of High Priority Significant Grid Users & Terms of Re-energisation

Within GB, a GB High Priority Significant Grid User would be classified as one of the following: -

A Black Start Service Provider

Generating Units, Power Park Modules and Power Generating Modules at a Power Station directly connected to the National Electricity Transmission System with priority given to Synchronous Generation; or

Generating Units, Power Park Modules and Power Generating Modules at a Power Station with a Registered Capacity of 100MW or more with priority given to Synchronous Generation.

Appendix D: Current Restoration Plans & Black Start Service Providers

Due to the sensitive information held within these plans, these have been lodged with the Authority.

Appendix E: Substations Essential for Restoration Plan Procedures

Due to the sensitive information held within these plans, these have been lodged with the Authority.

Appendix F: List of TSOs & DSOs Responsible for Implementing System Restoration Plan Measures

The responsible companies are as follows:

- Electricity North West
- National Grid Electricity Transmission Plc
- Northern Powergrid (North East & Yorkshire)
- Scottish and Southern Energy Networks (Scottish and Southern Energy Power Distribution Ltd, Scottish Hydro Electric Transmission plc, Scottish Hydro Electric Power Distribution Plc, Southern Electric Power Distribution Plc)
- SP Energy Networks (SP Transmission Plc, SP Distribution Plc, SP Manweb Plc).
- UK Power Networks (Eastern Power Network, London Power Network, Southern Power Network)
- Western Power Distribution (Midlands, South Wales and West)
- All OFTOs
- HVDC Systems with cross border capability (and defined as TSOs)

All parties on this list are responsible for ensuring they are able to enact their System Restoration Plan responsibilities.

Appendix G: Glossary

Balancing Mechanism Participant	A person who is responsible for and controls one or more BM Units or where a Bilateral Agreement specifies that a User is required to be treated as a BM Participant for the purposes of the Grid Code. For the avoidance of doubt, it does not imply that they must be active in the Balancing Mechanism.
Balancing Service Provider	A Balancing Service Provider (BSP) is a market participant providing Balancing Services to its Connecting TSO.
Black Start Service Provider	As defined in the Glossary and Definitions of the Grid Code.
BEIS	Her Majesty's Government Department for Business, Energy and Industrial Strategy.
Defence Service Provider	A Defence Service Provider is a legal entity with a legal or contractual obligation to provide a service contributing to one or several measures of the System Defence Plan. In GB, a Defence Service Provider has the same meaning as a GB Significant Grid User (GB SGU)
DSO	A Distribution System Operator is a natural or legal person responsible for operating, ensuring the maintenance of and, if necessary, developing the distribution system in a given area and, where applicable, its interconnections with other systems and for ensuring the long-term ability of the system to meet reasonable demands for the distribution of electricity.
EU Code User	A User who is any of the following: - (a) A Generator in respect of a Power Generating Module (excluding a DC Connected Power Park Module) or OTSDUA (in respect of an AC Offshore Transmission System) whose Main Plant and Apparatus is connected to the System on or after 27 April 2019 and who concluded Purchase Contracts for its Main Plant and Apparatus on or after 17 May 2018 (b) A Generator in respect of any Type C or Type D Power Generating Module which is the subject of a Substantial Modification which is effective on or after 27 April 2019.

	(c)	A Generator in respect of any DC Connected Power Park Module whose Main Plant and Apparatus is connected to the System on or after 8 September 2019 and who had concluded Purchase Contracts for its Main Plant and Apparatus on or after 28 September 2018.
	(d)	A Generator in respect of any DC Connected Power Park Module which is the subject of a Substantial Modification which is effective on or after 8 September 2019.
	(e)	An HVDC System Owner or OTSDUA (in respect of a DC Offshore Transmission System including a Transmission DC Converter) whose Main Plant and Apparatus is connected to the System on or after 8 September 2019 and who had concluded Purchase Contracts for its Main Plant and Apparatus on or after 28 September 2018.
	(f)	An HVDC System Owner or OTSDUA (in respect of a DC Offshore Transmission System including a Transmission DC Converter) whose HVDC System or DC Offshore Transmission System including a Transmission DC Converter) is the subject of a Substantial Modification on or after 8 September 2019.
	(g)	A User which the Authority has determined should be considered as an EU Code User.
	(h)	A Network Operator whose entire distribution System was first connected to the National Electricity Transmission System on or after 18 August 2019 and who had placed Purchase Contracts for its Main Plant and Apparatus in respect of its entire distribution System on or after 7 September 2018. For the avoidance of doubt, a Network Operator will be an EU Code User if its entire distribution System is connected to the National Electricity Transmission

	System at EU Grid Supply Points only. (i) A Non Embedded Customer whose Main Plant and Apparatus at each EU Grid Supply Point was first connected to the National Electricity Transmission System on or after 18 August 2019 and who had placed Purchase Contracts for its Main Plant and Apparatus at each EU Grid Supply Point on or after 7 September 2018 or is the subject of a Substantial Modification on or after 18 August 2019. (j) A Storage User in respect of an Electricity Storage Module whose Main Plant and Apparatus is connected to the System on or after XXXX 2020 and who concluded Purchase Contracts for its Main Plant and Apparatus on or after XXXX 2019. *(Dates to be updated following the Ofgem decision on GC0096 modification)*
EU Generator	A Generator or OTSDUA who is also an EU Code User.
European Regulation (EU) 2016/631	Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a Network Code on Requirements of Generators
European Regulation (EU) 2016/1388	Commission Regulation (EU) 2016/1388 of 17 August 2016 establishing a Network Code on Demand Connection
European Regulation (EU) 2016/1447	Commission Regulation (EU) 2016/1447 of 26 August 2016 establishing a network code on requirements for Grid Connection of High Voltage Direct Current Systems and Direct Current-connected Power Park Modules
European Regulation (EU) 2017/1485	Commission Regulation (EU) 2017/1485 establishing a guideline on electricity transmission system operation
European Regulation (EU) 2017/2195	Commission Regulation (EU) 2017/2195 of 17 December 2017 establishing a guideline on electricity balancing
GB Code User	A User in respect of:- (a) A Generator or OTSDUA whose Main Plant and Apparatus is connected to the System before 27 April 2019, or who had concluded Purchase Contracts for its Main Plant and Apparatus before 17 May 2018, or

	whose Plant and Apparatus is not the subject of a Substantial Modification which is effective on or after 27 April 2019; or (b) A DC Converter Station owner whose Main Plant and Apparatus is connected to the System before 8 September 2019, or who had concluded Purchase Contracts for its Main Plant and Apparatus before 28 September 2018, or whose Plant and Apparatus is not the subject of a Substantial Modification which is effective on or after 8 September 2019; or (c) A Non-Embedded Customer whose Main Plant and Apparatus was connected to the National Electricity Transmission System at a GB Grid Supply Point before 18 August 2019 or who had placed Purchase Contracts for its Main Plant and Apparatus before 7 September 2018 or that Non Embedded Customer is not the subject of a Substantial Modification which is effective on or after 18 August 2019; or (d) A Network Operator whose entire distribution System was connected to the National Electricity Transmission System at one or more GB Grid Supply Points before 18 August 2019 or who had placed Purchase Contracts for its Main Plant and Apparatus in respect of its entire distribution System before 7 September 2018 or its entire distribution System is not the subject of a Substantial Modification which is effective on or after 18 August 2019. For the avoidance of doubt, a Network Operator would still be classed as a GB Code User where its entire distribution System was connected to the National Electricity Transmission System at one or more GB Grid Supply Points, even where that entire distribution System may have one or more EU Grid Supply Points but still comprises of GB Grid Supply Points.

GB High Priority Significant Grid User	A High Priority Significant Grid User is a Party defined in Appendix C of this System Restoration Plan.
GB Significant Grid User or GB SGU	A GB Significant Grid User is a Party defined in Table B2 of Appendix B of this System Restoration Plan.
Frequency Sensitive Mode	A Genset, or Type C Power Generating Module or Type D Power Generating Module or DC Connected Power Park Module or HVDC System operating mode which will result in Active Power output changing, in response to a change in System Frequency, in a direction which assists in the recovery to Target Frequency, by operating so as to provide Primary Response and/or Secondary Response and/or High Frequency Response.
HVDC System	An electrical power system which transfers energy in the form of high voltage direct current between two or more alternating current (AC) buses and comprises at least two HVDC Converter Stations with DC Transmission lines or cables between the HVDC Converter Stations.
Local Joint Restoration Plans	NGESO Restoration plans agreed prior to a shutdown event between a Restoration Service Provider, relevant DSO and relevant TSO(s). These detail the agreed method and procedure of restoration from an individual Restoration Service Provider.
GB NETS	Great Britain National Electricity Transmission System.
NGESO	The National Electricity Transmission System Operator is responsible for operating the Onshore Transmission System and, where owned by Offshore Transmission Licensees, Offshore Transmission Systems. The NGESO for Great Britain is currently National Grid Electricity System Operator.
Non-Embedded Customer	A Customer in Great Britain, except for a Network Operator acting in its capacity as such, receiving electricity direct from the Onshore Transmission System irrespective of from whom it is supplied.
Partial Shutdown	A Partial Shutdown is the same as a Total Shutdown except that all generation has ceased in a separate part of the Total System and there is no electricity supply from External Interconnections or other parts of the Total System to that part of the Total System. Therefore, that part of the Total System is shutdown with the result that it is not possible for that part of the Total System to begin to function again without TSO's directions relating to a Black Start.

Power Generating Module	Either a Synchronous Power-Generating Module or a Power Park Module owned or operated by an EU Generator or a GB Generator.
Power Island	One or more Power Stations, together with complementary local demand.
Power System Synchroniser	Equipment which synchronises two electrically separate synchronous areas together to create one synchronous area.
Restoration Service Provider	A restoration service provider refers to "a legal entity with a legal or contractual obligation (including a Black Start Service Provider) to provide a service contributing to one or several measures of the restoration plan". In GB, a Restoration Service Provider is a GB Significant Grid User (GB SGU) and/or a Black Start Service Provider.
Skeleton Network	The detailed restoration plan for restoring a skeletal GB NETS.
Target Frequency	That Frequency determined by The Company, in its reasonable opinion, as the desired operating Frequency of the Total System or Power Island. This will normally be 50.00Hz plus or minus 0.05Hz, except in exceptional circumstances as determined by The Company, in its reasonable opinion when this may be 49.90 or 50.10Hz. An example of exceptional circumstances may be difficulties caused in operating the System during disputes affecting fuel supplies.
Total System	The National Electricity Transmission System and all User Systems in the National Electricity Transmission System Operator Area.
Total Shutdown	A Total Shutdown is the situation existing when all generation has ceased and there is no electricity supply from External Interconnections. Therefore, the Total System has shutdown with the result that it is not possible for the Total System to begin to function again without TSO's directions relating to a Black Start.
TSO	A Transmission System Operator is a natural or legal person responsible for operating, ensuring the maintenance of and, if necessary, developing the transmission system in a given area and, where applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the transmission of electricity.
Type C Power Generating Module	A Power-Generating Module with a Grid Entry Point or User System Entry Point below 110 kV and a Maximum Capacity of 10 MW or greater but less than 50 MW.

Type D Power Generating Module	A Power-Generating Module: with a Grid Entry Point or User System Entry Point at, or greater than, 110 kV; or with a Grid Entry Point or User System Entry Point below 110 kV and with Maximum Capacity of 50 MW or greater.

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