

GRID CODE MODIFICATION GC0156

CONSEQUENTIAL POST GC0148

05 APRIL~~22 MARCH~~ 2023

EXTRACTS FROM GRID CODE

Key – Black – Baseline Legal Text

Text taken from GC0148 when submitted to Ofgem in October 2022

Amended text from GC0148 post send back to address Ofgem defect (ie Aggregators)

Changes introduced through Grid Code Modification GC0156 – track change marked

Extracts from Glossary and Definitions

Critical Tools and Facilities

Apparatus and tools required in relation to System Restoration Black-Start:

- a) In the case of **The Company** include, but are not limited to:
- i) Tools for operating and monitoring the **Transmission System** including but not limited to state estimation, the **Balancing Mechanism, Load and System Frequency** control, alarms, real time system operation and operational security analysis including off line transmission analysis;
 - ii) The ability to control, protect and monitor transmission assets including switchgear, tap changers and other **Transmission System** equipment including where available auxiliary equipment and to ensure the safe operation of **Plant and Apparatus** and the safety of personnel;
 - iii) **Control Telephony** systems as provided for in CC.6.5.1 – CC.6.5.5 and ECC.6.5.1 – ECC.6.5.5;
 - iv) Operational telephony as provided for in STCP 04-5; and
 - v) Tools and communications systems to facilitate cross border operations.
- b) In the case of **Generators, HVDC System Owners, DC Converter Station Owners, Defence Service Providers and Restoration Service Providers Contractors and for Virtual Lead Parties on or after 31 December 2026:**
- i) Tools for monitoring relevant **their Plant and Apparatus**;
 - ii) The ability to control, protect and monitor their **Plant and Apparatus** necessary for **System Restoration** including as applicable primary **Plant**, switchgear, tap changers and other auxiliary equipment and to ensure the safe operation of **Plant** and personnel; and
 - iii) **Control Telephony** as provided for in CC.6.5.1 – CC.6.5.5 and ECC.6.5.1 – ECC.6.5.5.
- c) In the case of **BM Participants and Virtual Lead Parties who are not Generators, HVDC System Owners, DC Converter Station owners, Defence Service Providers or Restoration Service Providers** as provided for in item b) above:
- i) Tools for monitoring relevant **Plant and Apparatus** (excluding **Plant and Apparatus** not owned by the **BM Participant or Virtual Lead Party**); and
 - ii) **Control Telephony** as provided for in CC.6.5.1 – CC.6.5.5 and ECC.6.5.1 – ECC.6.5.5
- d) In the case of **Network Operators:**
- i) Control room **Apparatus** and tools for monitoring their **System** including but not limited to, alarms, real time system operation and operational security analysis including off line network analysis;
 - ii) The ability to control, protect and monitor those assets necessary for **System Restoration Black-Start** including switchgear, tap changers, active network management schemes and other network equipment

	<p>including where available auxiliary equipment and to ensure the safe operation of Plant and personnel; and</p> <p>iii) Control Telephony as provided for in CC.6.5.1 – CC.6.5.5 and ECC.6.5.1 – ECC.6.5.5.</p> <p>e) In the case of Non-Embedded Customers:</p> <p>i) Tools for monitoring their System including but not limited to, alarms and real time system operation;</p> <p>ii) The ability to control, protect and monitor those assets necessary for System Restoration Black-Start including switchgear, tap changers and other network equipment including where available auxiliary equipment and to ensure the safe operation of Plant and personnel; and</p> <p>Control Telephony as provided for in CC.6.5.1 – CC.6.5.5 and ECC.6.5.1 – ECC.6.5.5.</p>
Virtual Lead Party	As defined in the BSC

Extracts from Connection Conditions

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CC.3 SCOPE

- CC.3.1 The **CC** applies to **The Company** and to **GB Code Users**, which in the **CC** means:
- (a) **GB Generators** (other than those which only have **Embedded Small Power Stations**), including those undertaking **OTSDUW**;
 - (b) **Network Operators**;
 - (c) **Non-Embedded Customers**;
 - (d) **DC Converter Station** owners; ~~and~~
 - (e) **BM Participants** and **Externally Interconnected System Operators** who are also **GB Code Users** in respect of CC.6.5, ~~CC.7.9, and CC.7.10~~ and CC.7.11 only; and
 - (f) In relation to **Distribution Restoration Zones**, **Restoration Contractors** who are **Non-CUSC Parties** and whose **Embedded Plant** needs to comply with the requirements of EREC G59, other than those included in (a) to (e) above, shall only be required to satisfy CC.6.1.2, CC.6.1.3, CC.6.2.2.1.2, CC.6.2.2.6, CC.6.3, CC.7.10, CC.7.11 and CC.8.1 unless additional technical requirements are provided for in the **Anchor Restoration Contract** or **Top Up Restoration Contract**. **Restoration Contractors** who are **Non-CUSC Parties** and whose **Embedded Plant** needs to comply with EREC G99 are not included in the scope of the **CC** and should refer to the **ECC**.

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- CC.7.9 **GB Generators**, **DC Converter Station** owners and **BM Participants** ~~(including **Virtual Lead Parties**)~~ shall provide a **Control Point**.

a) In the case of **GB Generators** and **DC Converter Station** owners, for each **Power Station** or **DC Converter Station** directly connected to the **National Electricity Transmission System** and for each **Embedded Large Power Station** or **Embedded DC Converter Station**, the **Control Point** shall receive and act upon instructions pursuant to OC7 and BC2 at all times that **Generating Units** or **Power Park Modules** at the **Power Station** are generating or available to generate or **DC Converters** at the **DC Converter Station** are importing or exporting or available to do so. In the case of all **BM Participants**, the **Control Point** shall be continuously staffed except where the **Bilateral Agreement** specifies that compliance with BC2 is not required, in which case the **Control Point** shall be staffed between the hours of 0800 and 1800 each day.

b) In the case of **BM Participants**, the **BM Participant's Control Point** shall be capable of receiving and acting upon instructions from **The Company** and the **relevant Transmission Licensees' Control Engineers**.

The Company will normally issue instructions via automatic logging devices in accordance with the requirements of CC.6.5.8(b).

Where the **BM Participant's Plant** and **Apparatus** does not respond to an instruction from **The Company** via automatic logging devices, or where it is not possible for **The Company** to issue the instruction via automatic logging devices, **The Company** shall issue the instruction by telephone.

In the case of **BM Participants** who own and/or operate a **Power Station** or **DC Converter Station** with an aggregated **Registered Capacity** or **BM Participants** with **BM Units** with an aggregated **Demand Capacity** per **Control Point** of less than 50MW, or, where a site is not part of a **Virtual Lead Party** as defined in the **BSC**, a **Registered Capacity** or **Demand Capacity** per site of less than 10MW:

- a) where this situation arises, a representative of the **BM Participant** is required to be available to respond to instructions from **The Company** via the **Control Telephony** or **System Telephony** system, as provided for in CC.6.5.4, between the hours of 0800-1800 each day.
- b) Outside the hours of 0800-1800 each day, the requirements of BC2.9.7 shall apply.

For the avoidance of doubt, where **The Company** has agreed with a **BM Participant** who are unable to provide that **Control Telephony** is not required and where the **BM Participant** ~~and~~ does not have a continuously staffed **Control Point** the **BM Participant** may be unable to act as a **Defence Service Provider** and shall be unable to act as a **Restoration Contractor** ~~Service Provider~~ or **Black Start Service Provider** where these require **Control Telephony** or a **Control Point** in respect of the specification of any such services falling into these categories.

CC.7.10 Obligations on Users in respect of Critical Tools and Facilities

CC.7.10.1 From DD/MM/YY (this is one year after implementation) **The Company**, each **Generator**, **DC Converter Station** owner, **Network Operator**, **Non-Embedded Customer** and each **Restoration Contractor** ~~Service Provider~~ with a continuously staffed **Control Point** or **Control Centre** as provided for in CC.7.9 In addition to the requirements of CC.6.5.1 – CC.6.5.5 and CC.6.5.8(b), **The Company**, each **GB Code User**, each **BM Participant** (including **Virtual Lead Parties**) and each **Restoration Service Provider** shall:-

- (i) Ensure they have the appropriate **Critical Tools and Facilities** necessary to control their assets during ~~System Restoration~~**Black Start**, from their **Control Point** or **Control Centre** as appropriate for a minimum period of 72 hours (or such longer period as agreed between the **User Generator, DC Converter Station owner, Network Operator, Non-Embedded Customer** and/or **Restoration Contractor Service Provider** and **The Company**) following a **Total Shutdown or Partial Shutdown**.
- (ii) ~~In satisfying this requirement, The Company and GB Code Users in respect of their Critical Tools and Facilities shall~~ Ensure as far as reasonably practical that they have adequate control equipment redundancy in place so that in the event of a failure of one or more components of the control system its function is unimpaired.
- (iii) ~~Each GB Code User and Restoration Service Provider will~~ Report on the results of their management and testing for their **Critical Tools and Facilities** on request by **The Company**.

CC.7.10.2 From DD/MM/YY *(this is one year after implementation)* each **BM Participant** including a **Virtual Lead Party** with a continuously staffed **Control Point** as provided for in CC.7.9 (excluding those **BM Participants** covered by the requirements of CC.7.10.1), shall:-

- (i) Ensure they have the appropriate **Critical Tools and Facilities** (as defined in clause (c) of the definition of **Critical Tools and Facilities** in the **Grid Code Glossary and Definitions**) for a minimum period of 72 hours (or such longer period as agreed between the **BM Participant** including a **Virtual Lead Party** and **The Company**) following a **Total Shutdown or Partial Shutdown**.
- (ii) Ensure as far as reasonably practical that they have adequate control equipment redundancy in place at their **Control Point** so that in the event of a failure of one or more components of their **Critical Tools and Facilities** its function is unimpaired.
- (iii) Report on the results of their management and testing for their **Critical Tools and Facilities** on request by **The Company**.

~~In satisfying this requirement, The Company and GB Code Users in respect of their Critical Tools and Facilities shall ensure as far as reasonably practical that they have adequate control equipment redundancy in place so that in the event of a failure of one or more components of the control system its function is unimpaired.~~

CC.7.10.3 In the case of a **BM Participant** or **Virtual Lead Party** which has an **Anchor Restoration Contract** or **Top Up Restoration**Black Start Contract** in respect of one or more of its aggregated **Plants**, the requirements of CC.7.10.1 shall only apply between the **Control Point** of the **BM Participant** or **Virtual Lead Party** and that **Plant** with an **Anchor Plant Capability** or **Top Up Restoration Capability**Black Start Contract**. For other non-contracted **Plants** under the control of the **BM Participant** or **Virtual Lead Party**, the requirements of CC.7.10.2 shall continue to apply. ~~Each GB Code User and Restoration Service Provider will report on the results of their management and testing for their Critical Tools and Facilities on request by The Company.~~****

- CC.7.10.4 Where a **Network Operator** installs a **Distribution Restoration Zone Control System** to facilitate operation of a **Distribution Restoration Zone Plan**, the high level functional requirements of the **Distribution Restoration Zone Control System** shall be in accordance with the guidance provided in of the applicable **Electrical Standard** listed in the annex to the **General Conditions**.
- CC.7.10.5 **Network Operators** shall ensure that their substations which are required to be operable during **System Restoration** have 72 hour electrical supply resilience to facilitate **Network Operators** being able to:
- restore auxiliary supplies to **Transmission** substations;
 - switch **Demand** in accordance with a **Restoration Plan**;
 - support **The Company** in satisfying the requirements of the **Electricity System Restoration Standard**.
- CC.7.10.6 **The Company**, each **GB Code User** and **Restoration Contractor** shall ensure their **Critical Tools and Facilities** are cyber secure accordance with the Security of Network and Information System (NIS) Regulations. This requirement applies to **The Company**, **GB Code Users** and **Restoration Contractors** at all times.
- CC.7.10.7 Notwithstanding the requirements of CC.7.10.1, **The Company**, each **GB Code User** and **Restoration Contractor** shall ensure that their **Critical Tools and Facilities** are sufficiently robust and reliable such that they are capable of handling, processing and prioritising the significant volumes of data that could reasonably be expected to occur during **System Restoration**.
- CC.7.10.8 Where an **Offshore Generator** is connected to an **Offshore Transmission System** and the **Offshore Transmission Licensee** does not have **Critical Tools and Facilities** installed on its **Offshore Transmission System**, **The Company** will make an allowance for the **Critical Tools and Facilities** required to be installed by the **Offshore Generator**.
- CC.7.11 Obligations on and Assurance from The Company, GB Code Users and Restoration Contractors during Total Shutdown and Partial Shutdown conditions
- CC.7.11.1 In respect of **The Company**, its **Apparatus** shall be designed such that it can safely shutdown and does not pose a risk to personnel or **Apparatus** in the event of a total loss of supply.
- CC.7.11.2 All **GB Code Users** and **Restoration Contractors** shall ensure their **Plant** and **Apparatus** can safely shut down and does not pose a risk to **Plant** and/or personnel in the event of a total loss of supplies at a **GB Code User's Site(s)** or **Restoration Contractor's** site be it caused by a **Total Shutdown**, **Partial Shutdown** or such other event. In satisfying this requirement, **Generators**, **DC Converter** owners and **Restoration Contractors** shall be able to demonstrate to **The Company** that in the event supplies were to be lost to their **Site**, then on the restoration of supplies, their **Plant** can be made operational and begin to operate in at least the same way and as quickly as would be expected for a cold start following a **Total System Shutdown** or **Partial System Shutdown** in accordance with the data submitted in PC.A.5.7 in accordance with the Week 24 process. For **GB Code Users** where they believe this requirement is cost prohibitive or technically impossible such **GB Code Users** shall discuss the issue with **The Company**, and **The Company** shall inform **The Authority** of the details agreed. Where such an issue cannot be agreed by **The Company**, following all reasonable attempts, or where the capability provided by the **GB Code User** cannot be agreed by **The Company** as being sufficient after examining all

reasonable alternative solutions through the **Compliance Processes**, the **GB Code User** may apply for a derogation from the **Grid Code**.

CC.7.11.3 The requirements of CC.7.11.1 and CC.7.11.2 shall apply for a period of total loss of supplies to **The Company's** operational sites or a **GB Code User's Site** or **Restoration Contractor's** site of up to 72 hours. **GB Code Users** and **Restoration Contractors** shall confirm to **The Company** that the total loss of supplies to their **Site** for a period of up to 72 hours shall not result in damage to **Plant** and **Apparatus** such that it would then be unable to operate upon restoration of electrical supplies to the site.

CC.7.11.4 **Network Operators** shall ensure that in coordination with **The Company** and relevant **Transmission Licensees**, they have the capability to switch **Demand** at sufficient speed to support **The Company** in satisfying the requirements of the **Electricity System Restoration Standard**. This requirement assumes:

- the successful implementation of **Restoration Plans**,
- the successful delivery of the obligations of **Restoration Contractors** who are parties to these plans; and
- the further requirements of **OC9**.

Extracts from ECC's

ECC.3 SCOPE

ECC.3.1 The **ECC** applies to **The Company** and to **Users**, which in the **ECC** means:

- (a) **EU Generators** (other than those which only have **Embedded Small Power Stations**), including those undertaking **OTSDUW** including **Power Generating Modules**, and **DC Connected Power Park Modules**. For the avoidance of doubt, **Electricity Storage Modules** are included within the definition of **Power Generating Modules** for which the requirements of the **ECC** would be equally applicable.
- (b) **Network Operators** but only in respect of:-
 - (i) **Network Operators** who are **EU Code Users**
 - (ii) **Network Operators** who only have **EU Grid Supply Points**
 - (iii) **Embedded Medium Power Stations** not subject to a **Bilateral Agreement** as provided for in ECC.3.2, ECC.3.3, EC3.4, EC3.5, ECC5.1, ECC.6.4.4 and ECA.3.4;
 - (iv) Notwithstanding the requirements of ECC3.1(b)(i)(ii) and (iii) , **Network Operators** who own and/or operate **EU Grid Supply Points**, are only required to satisfy the requirements of this **ECC** in relation to each **EU Grid Supply Point**. **Network Operators** in respect of all other **Grid Supply Points** should continue to satisfy the requirements as specified in the **CCs**.
- (c) **Non-Embedded Customers** who are also **EU Code Users** ;
- (d) **HVDC System Owners** who are also **EU Code Users**; ~~and~~
- (e) **BM Participants** and **Externally Interconnected System Operators** who are also **EU Code Users** in respect of ECC.6.5, ECC.7.9, ~~and~~ ECC.7.10 and ECC.7.11- only; and-

(f) In relation to **Distribution Restoration Zones**, **Restoration Contractors** who are **Non-CUSC Parties** and whose **Embedded Plant** needs to comply with the requirements of EREC G99, other than those included in (a) to (e) above, shall only be required to satisfy ECC.6.1.2, ECC.6.2.2.1.2, ECC.6.2.2.7, ECC.6.3, ECC.6.6, ECC.7.10, ECC.7.11 and ECC.8.1 unless additional Grid Code requirements are provided for in the **Anchor Restoration Contract** or **Top Up Restoration Contract**. **Restoration Contractors** who are **Non-CUSC Parties** and whose **Embedded Plant** needs to comply with EREC G59 are not included in the scope of the **ECC** and should refer to the **CC**.

ECC.7.9

Generators, HVDC System Owners and BM Participants (including **Virtual Lead Parties**) shall provide a **Control Point**.

- a) In the case of **EU Generators** and **HVDC System Owners**, for each **Power Station** or **HVDC System** directly connected to the **National Electricity Transmission System** and for each **Embedded Large Power Station** or **Embedded HVDC System**, the **Control Point** shall receive and act upon instructions pursuant to OC7 and BC2 at all times that **Power Generating Modules** at the **Power Station** are generating or available to generate or **HVDC Systems** are importing or exporting or available to do so. In the case of all **BM Participants**, the **Control Point** shall be continuously staffed except where the **Bilateral Agreement** specifies that compliance with BC2 is not required, in which case the **Control Point** shall be staffed between the hours of 0800 and 1800 each day.
- b) In the case of **BM Participants**, the **BM Participant's Control Point** shall be capable of receiving and acting upon instructions from **The Company** and the relevant **Transmission Licensees' Control Engineers**.

The Company will normally issue instructions via automatic logging devices in accordance with the requirements of ECC.6.5.8(b).

Where the **BM Participant's Plant** and **Apparatus** does not respond to an instruction from **The Company** via automatic logging devices, or where it is not possible for **The Company** to issue the instruction via automatic logging devices, **The Company** shall issue the instruction by telephone.

In the case of **BM Participants** who own and/or operate a **Power Station** or **HVDC System** with an aggregated **Registered Capacity** or **BM Participants** with **BM Units** with an aggregated **Demand Capacity** per **Control Point** of less than 50MW, or, where a site is not part of a **Virtual Lead Party** as defined in the **BSC**, a **Registered Capacity** or **Demand Capacity** per site of less than 10MW:

- a) where this situation arises, a representative of the **BM Participant** is required to be available to respond to instructions from **The Company** via the **Control Telephony** or **System Telephony** system, as provided for in ECC.6.5.4, between the hours of 0800-1800 each day.
- b) Outside the hours of 0800-1800 each day, the requirements of BC2.9.7 shall apply.

For the avoidance of doubt, **BM Participants** who are unable to provide **Control Telephony** and do not have a continuously staffed **Control Point** may be unable to act as a **Defence Service Provider** and shall be unable to act as a **Restoration Contractor** ~~**Service Provider** or **Black Start Service Provider**~~ where these require **Control Telephony** or a **Control Point** in respect of the specification of any such services falling into these categories.

ECC.7.10 Obligations on Users in respect of Critical Tools and Facilities

ECC.7.10.1 From DD/MM/YY *(this is one year after implementation)* **The Company, each Generator, HVDC System Owner, Network Operator, Non-Embedded Customer and each Restoration ContractorService Provider** with a continuously staffed **Control Point** or **Control Centre** as provided for in ECC.7.9 In addition to the requirements of CC.6.5.1 – CC.6.5.5 and CC.6.5.8(b), **The Company, each GB Code User, each BM Participant** (including **Virtual Lead Parties**) and each **Restoration Service Provider** shall:-

- (i) **Ensure they have the appropriate Critical Tools and Facilities necessary to control their assets for System RestorationBlack Start, from their Control Point or Control Centre as appropriate for a minimum period of 72 hours (or such longer period as agreed between the User Generator, HVDC System Owner, Network Operator, Non-Embedded Customer and/or Restoration ContractorService Provider- and The Company) following a Total Shutdown or Partial Shutdown.**
- (ii) **In satisfying this requirement, The Company and GB Code Users in respect of their Critical Tools and Facilities shall Ensure as far as reasonably practical that they have adequate control equipment redundancy in place so that in the event of a failure of one or more components of the control system its function is unimpaired.**
- (iii) **Each GB Code User and Restoration Service Provider will Report on the results of their management and testing for their Critical Tools and Facilities on request by The Company.**

ECC.7.10.2 From DD/MM/YY *(this is one year after implementation)* each **BM Participant** including a **Virtual Lead Party** with a continuously staffed **Control Point** as provided for in ECC.7.9 (excluding those **BM Participants** covered by the requirements of ECC.7.10.1), shall:-

- (iv) **Ensure they have the appropriate Critical Tools and Facilities (as defined in clause (c) of the definition of Critical Tools and Facilities in the Grid Code Glossary and Definitions) for a minimum period of 72 hours (or such longer period as agreed between the BM Participant including a Virtual Lead Party and The Company) following a Total Shutdown or Partial Shutdown.**
- (v) **Ensure as far as reasonably practical that they have adequate control equipment redundancy in place at their Control Point so that in the event of a failure of one or more components of their Critical Tools and Facilities its function is unimpaired.**
- (vi) **Report on the results of their management and testing for their Critical Tools and Facilities on request by The Company.**

In satisfying this requirement, The Company and GB Code Users in respect of their Critical Tools and Facilities shall ensure as far as reasonably practical that they have adequate control equipment redundancy in place so that in the event of a failure of one or more components of the control system its function is unimpaired.

ECC.7.10.3

In the case of a **BM Participant** or **Virtual Lead Party** which has an **Anchor Restoration Contract** or **Top Up Restoration Black Start Contract** in respect of one or more of its aggregated **Plants**, the requirements of ECC.7.10.1 shall only apply between the **Control Point** of the **BM Participant** or **Virtual Lead Party** and that **Plant** with an **Anchor Plant Capability** or **Top Up Restoration Capability Black Start Contract**. For other non-contracted **Plants** under the control of the **BM Participant** or **Virtual Lead Party**, the requirements of ECC.7.10.2 shall continue to apply. ~~Each **GB Code User** and **Restoration Service Provider** will report on the results of their management and testing for their **Critical Tools and Facilities** on request by **The Company**.~~

ECC.7.10.4

Where a **Network Operator** installs a **Distribution Restoration Zone Control System** to facilitate operation of a **Distribution Restoration Zone Plan**, the high level functional requirements of the **Distribution Restoration Zone Control System** shall be in accordance with the guidance provided in the applicable **Electrical Standard** listed in the annex to the **General Conditions**.

ECC.7.10.5

Network Operators shall ensure that their substations which are required to be operable during **System Restoration** have 72 hour electrical supply resilience to facilitate **Network Operators** being able to:

- restore auxiliary supplies to **Transmission** substations;
- switch **Demand** in accordance with a **Restoration Plan**;
- support **The Company** in satisfying the requirements of the **Electricity System Restoration Standard**.

ECC.7.10.6

The Company, each **EU Code User** and **Restoration Contractor** shall ensure their **Critical Tools and Facilities** are cyber secure accordance with the Security of Network and Information System (NIS) Regulations. This requirement applies to **The Company**, **EU Code Users** and **Restoration Contractors** at all times.

ECC.7.10.7

Notwithstanding the requirements of ECC.7.10.1, **The Company**, each **EU Code User** and **Restoration Contractor** shall ensure that their **Critical Tools and Facilities** including but not limited to control systems, communications systems, operational metering and telemetry systems including SCADA, are sufficiently robust and reliable such that they are capable of handling, processing and prioritising the significant volumes of data that could reasonably be expected to occur during **System Restoration**.

ECC.7.10.8

Where an **Offshore Generator** is connected to an **Offshore Transmission System** and the **Offshore Transmission Licensee** does not have **Critical Tools and Facilities** installed on its **Offshore Transmission System**, **The Company** will make an allowance for the **Critical Tools and Facilities** required to be installed by the **Offshore Generator**.

ECC.7.11

Obligations on and Assurance from **The Company**, **GB Code Users** and **Restoration Contractorss** during **Total Shutdown** and **Partial Shutdown** conditions

ECC.7.11.1 In respect of **The Company**, its **Apparatus** shall be designed such that it can safely shutdown and does not pose a risk to personnel or **Apparatus** in the event of a total loss of supply.

ECC.7.11.2 All **EU Code Users** and **Restoration Contractors** shall ensure their **Plant** and **Apparatus** can safely shut down and does not pose a risk to **Plant** and/or personnel in the event of a total loss of supplies at **EU Code User's Site(s)** or **Restoration Contractor's** site be it caused by a **Total Shutdown, Partial Shutdown** or such other event. In satisfying this requirement, **Generators, HVDC System Owners** and **Restoration Contractors** shall be able to demonstrate to **The Company** that in the event supplies were to be lost to their **Site**, then on the restoration of supplies, their **Plant** can be made operational and begin to operate in at least the same way and as quickly as would be expected for a cold start following a **Total System Shutdown** or **Partial System Shutdown** in accordance with the data submitted in PC.A.5.7 in accordance with the Week 24 process. For **EU Code Users** where they believe this requirement is cost prohibitive or technically impossible, such **EU Code Users** shall discuss the issue with **The Company**, and **The Company** shall inform **The Authority** of the details agreed. Where such an issue cannot be agreed by **The Company** following all reasonable attempts or where the capability provided by the **EU Code User** cannot be agreed by **The Company** as being sufficient after examining all reasonable alternative solutions through the **Compliance Processes**, the **EU Code User** may apply for a derogation from the Grid Code.

ECC.7.11.3 The requirements of ECC.7.11.1 and ECC.7.11.2 shall apply for a period of total loss of supplies to **The Company's** operational sites or an **EU Code User's Site** or **Restoration Contractor's** site of up to 72 hours. **EU Code Users** and **Restoration Contractors** shall confirm to **The Company** that the total loss of supplies to their **Site** for a period of up to 72 hours shall not result in damage to **Plant** and **Apparatus** such that it would then be unable to operate upon restoration of electrical supplies to the site.

ECC.7.11.4 **Network Operators** shall ensure that in coordination with **The Company** and relevant **Transmission Licensees**, they have the capability to switch **Demand** at sufficient speed to support **The Company** in satisfying the requirements of the **Electricity System Restoration Standard**. This requirement assumes:

- the successful implementation of **Restoration Plans**,
- the successful delivery of the obligations of **Restoration Contractors** who are parties to these plans; and
- the further requirements of OC9.