

Workgroup Consultation

CM089: Implementation of the Electricity System Restoration Standard

Overview: This Modification is proposing several changes to the STC to facilitate Special Condition 2.2 of NGESO Transmission Licence. Implementing an Electricity System Restoration Standard (ESRS) which requires 60% of electricity demand to be restored within 24 hours in all regions, and 100% of electricity demand to be restored within 5 days nationally.

Modification process & timetable



Have 5 minutes? Read our [Executive summary](#)

Have 20 minutes? Read the full [Workgroup Consultation](#)

Have 30 minutes? Read the full Workgroup Consultation and Annexes.

Status summary: The Workgroup are seeking your views on the work completed to date to form the final solution to the issue raised.

This modification is expected to have a: High impact Transmission Licensees and the Electricity System Operator

Governance route	Standard Governance modification with assessment by a Workgroup	
Who can I talk to about the change?	Proposer: Sade Adenola, ESO Sade.adenola@nationalgrideso.com Phone: 07748180789	Code Administrator Chair: Milly Lewis Milly.lewis@nationalgrideso.com Phone: 07811036380
How do I respond?	Send your response proforma to stcteam@nationalgrideso.com by 5pm on 18 May 2023	

Contents

Contents	2
Executive summary	3
What is the issue?	4
Why change?	4
What is the solution?	5
Proposer’s solution.....	5
Workgroup considerations	5
Draft legal text	7
What is the impact of this change?	7
Proposer’s assessment against Code Objectives	7
When will this change take place?	8
Implementation date	8
Date decision required by	8
Implementation approach	8
Interactions	8
How to respond	8
Standard Workgroup consultation questions	8
Specific Workgroup consultation questions	8
Acronyms, key terms and reference material	9
Reference material	9
Annexes	9

Executive summary

This modification is seeking to clarify the requirements on STC parties impacted by the ESRS, so that the ESO can satisfy its new Licence Obligation.

What is the issue?

The Grid Code is proposed to be updated through Grid Code Modification [GC0156](#) which if approved will result in consequential changes to the STC so that the ESRS can be implemented.

What is the solution and when will it come into effect?

Proposer's solution: Updating Schedule 2, Schedule 3, Section C, Section D, Section J and Section K of the STC.

Implementation date: 31 December 2026

What is the impact if this change is made?

High impact: Transmission Licensees and the Electricity System Operator

Interactions

There are a suite of modifications related to the implementation of the Electricity System Restoration Standard; Grid Code [GC0156](#); CUSC [CMP398](#) and [CMP412](#); BSC [P451](#); STC-P changes [PM0128](#) and SQSS [GSR032](#).

What is the issue?

In April 2021, the Department for Business, Energy and Industrial Strategy (BEIS¹) released a [policy statement](#) setting out the need to introduce a legally binding target for the restoration of electricity supplies in the event of a total or partial shutdown of the National Electricity Transmission System (NETS).

This new policy is called the Electricity System Restoration Standard (ESRS). As a consequence of BEIS's policy statement, Ofgem performed an [initial consultation](#) in April 2021 followed by a [statutory consultation](#) in July 2021 on licence amendments to facilitate the introduction of an ESRS, and to align the regulatory framework for procurement of restoration services with that of other balancing services.

On 24 August 2021, Ofgem published a [decision letter](#) stating that they made the decision to make the licence modifications. The modification decisions are publicly available and were implemented on 19 October 2021.

These licence modifications include but not limited to:

- Introducing the definition of “restoration services” in Standard Condition C1 and amending the definition of balancing services to include “restoration services”
- Replacing all references to “Black Start” with “Electricity System Restoration” in the Electricity Transmission Licence, including in the ESO's Special Licence Conditions, to align the licence terminology with BEIS's policy
- Introduction of updated Special Condition 2.2 of NGENSO's Transmission Licence requiring the introduction of an ESRS which requires 60% of electricity demand to be restored within 24 hours in all regions and 100% of electricity demand to be restored within 5 days nationally.

This modification is therefore necessary following a direction issued by BEIS. The date by which DESNZ¹ require the ESO to be compliant with the ESRS is 31 December 2026.

Why change?

This modification is seeking to clarify the requirements on STC parties impacted by restoration activities, so that the ESO can satisfy the new Licence Obligation. The Grid Code is proposed to be updated through Grid Code Modification GC0156 and if approved there are consequential changes proposed to the STC to align with the Grid Code so that the ESRS can be implemented.

This Modification is proposing several changes to the STC to facilitate Special Condition 2.2 of NGENSO Transmission Licence. Implementing the ESRS requires 60% of electricity demand to be restored within 24 hours in all regions, and 100% of electricity demand to be restored within 5 days nationally.

¹ BEIS is now referred to as Department for Energy Security and Net-Zero (DESNZ)

What is the solution?

Proposer's solution

As part of the solution, and the Workgroup will:

- Identify aspects of the STC that must change as a consequence to the changes proposed by GC0156.
- Identify new requirements to the STC as a consequence of ESRS.

The ESO's aim for implementation of the ESRS is to put in place measures, tools, and procedures that in the event of a total or partial shutdown, 60% of demand can be restored within all regions in 24 hours and 100% of demand can be restored in 5 days nationally.

This modification will build on the work completed through the implementation of the EU Emergency and Restoration Code ([EU 2017/2196](#)) which was in part introduced to the Grid Code through Grid Code modifications [GC0125](#), [GC0127](#) and [GC0128](#) and further being implemented through Grid Code modification [GC0148 \(Implementation of EU Emergency and Restoration Code Phase II\)](#).

To ensure consistency with the STC and the proposed changes through [GC0156 \(Facilitating the Implementation of the Electricity System Restoration Standard\)](#) including the additional tools which the GC0156 Workgroup have been developed for the ESRS to be met. At a high level these include the following features:

- Introduction of Distributed Re-Start and Distributed Restoration Zones.
- Changes to permit Restoration from Offshore Transmission Systems.
- Introduction of enhanced Critical Tools and Facilities – i.e., the ability to operate critical systems and assets during a Total System Shutdown or Partial Shutdown including data and communications systems.
- Introduction of an Assurance process including regular testing, desk top exercises and reporting including confirmation of successful plant running when site supplies are restored.
- Greater consistency between Local Joint Restoration Zone Plans and Distribution Restoration Zone Plans.
- Cyber Security requirements to Security of Network and Information System (NIS) Regulations.
- Changes to protection and control settings to permit Restoration.
- Changes to Grid Code Operating Code 9 and the role of Transmission Licensees in Local Joint Restoration Plans and Distribution Restoration Zone Plans.
- Definition of Black Start changed to System Restoration

Whilst these arrangements are being introduced to the Grid Code, the arrangements need to be applied to Transmission Licensees and reflected in the STC.

Workgroup considerations

The Workgroup convened 2 times to discuss the perceived issue, detail the scope of the proposed defect, devise potential solutions and assess the proposal in terms of the Applicable Code Objectives.

Consideration of the proposer's solution

Electricity Demand definition

The Proposer clarified that for restoration purposes, Electricity Demand is based on the Grid Code definition of National Demand.

National Demand	<p>The amount of electricity supplied from the Grid Supply Points plus:-</p> <ul style="list-style-type: none"> • that supplied by Embedded Large Power Stations, and • National Electricity Transmission System Losses, <p>minus:-</p> <ul style="list-style-type: none"> • the Demand taken by Station Transformers and, Pumped Storage Units' and Electricity Storage Modules'. <p>and, for the purposes of this definition, does not include:-</p> <ul style="list-style-type: none"> • any exports from the National Electricity Transmission System across External Interconnections.
------------------------	--

Section C: Transmission Services and Operations and Section D: Planning Co-Ordination Legal Text Changes

The Workgroup discussed the inclusion of the proposed GC0156 legal text (ECC 7.10, ECC 7.11, CC 7.10, CC 7.11, OC 5.7 and OC 9.4.7.6.2) and it was agreed that included a reference to the Data Registration Code Schedule 16 to provide clarity around the required testing for TOs.

The ESO representative confirmed that the proposed CC 7.10 and CC 7.11 obligations would be applied retrospectively with regards to Critical Tools and Facilities requirements. A Workgroup member raised concerns about the ability to meet the 72 hour resilience requirements by 2026.

Section K: Technical, Design and Operational Criteria and Performance Requirements for Offshore Transmission Systems Legal Text Changes

A Workgroup Member queried whether the 12 months post implementation cut off should be closer to 5 - 6 years. The ESO representative advised that the implementation cut off reflects the contract award date and not the connection date, and designs after this date should incorporate restoration.

As the proposed CM089 draft legal text mirrors the proposed Generator obligation in GC0156 when an asset transfers ownership to the OFTO (if the Offshore Transmission Network was developed under the Generator Build approach) it will have restoration capabilities incorporated.

A Workgroup Member queried that because OFTOs do not current place contracts for main plant and apparatus whether the change was relevant. The ESO representative advised that it has been included to allow for the OFTO Build to emerge.

A Workgroup member advised that as OFTOs are funded differently to incumbent TOs (no price control mechanism and no provision within their licence) there is no current mechanism to recover the costs for restoration.

The Proposer advised that Ofgem have been approached with regards to this issue and guidance is still awaited.

Consideration of other options

The Workgroup did not consider any Alternatives.

Draft legal text

The Workgroup were advised that the CM089 draft legal text covers both the GC0156 Original solution and WAGCM1², as the differing obligations are placed on Generators not TOs.

The draft legal text for this change can be found in Annex 3.

What is the impact of this change?

Proposer's assessment against Code Objectives

Proposer's assessment against STC Objectives	
Relevant Objective	Identified impact
(a) efficient discharge of the obligations imposed upon transmission licensees by transmission licences and the Act	Positive The new obligation is part of the ESO Transmission Licence Section 2.2.
(b) development, maintenance, and operation of an efficient, economical, and coordinated system of electricity transmission	Positive Provides a level playing field for STC Parties and to put measures in place to restore the NETS as soon as possible following a total or partial shutdown.
(c) facilitating effective competition in the generation and supply of electricity, and (so far as consistent therewith) facilitating such competition in the distribution of electricity	Positive Competition for Restoration Services is encouraged via the tender process to ensure a good availability of services at strategically located points which provides value for money. Transmission Licensees will be a fundamental part of delivering this process
(d) protection of the security and quality of supply and safe operation of the national electricity transmission system insofar as it relates to interactions between transmission licensees	Positive Provide assurance of restoring the System following a total or partial shutdown as quickly as possible
(e) promotion of good industry practice and efficiency in the implementation and administration of the arrangements described in the STC	Positive Provide assurance that the new licence obligation issued in Oct 2021 can be efficiently discharged.
(f) facilitation of access to the national electricity transmission system for generation not yet connected to the national electricity transmission system or distribution system;	Positive Provide assurance that the NETS is adequately assessed, designed and maintained to support restoring the System following a total or partial shutdown
(g) compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency.	Positive Provide assurance of restoring the System following a total or partial shutdown.

² [GC0156: Workgroup Report Annexes \(inclusive of proposed legal text\)](#)

Standard Workgroup consultation question: Do you believe that CM089 Original proposal better facilitates the Applicable Objectives?

When will this change take place?

Implementation date

31 December 2026

Date decision required by

Aligned with the Authority decision for GC0156.

Implementation approach

Implementation of ESRS will be facilitated by a New Restoration Decision Support Tool, Local Joint Restoration Plans, Distributed Restoration Zone Plans & Annual Restoration Strategy

Standard Workgroup consultation question: Do you support the implementation approach?

Interactions

- | | | | |
|--|---|---|--|
| <input checked="" type="checkbox"/> Grid Code | <input checked="" type="checkbox"/> BSC | <input checked="" type="checkbox"/> CUSC | <input checked="" type="checkbox"/> SQSS |
| <input checked="" type="checkbox"/> European Network Codes | <input type="checkbox"/> EBR Article 18 T&Cs ³ | <input checked="" type="checkbox"/> Other modifications | <input type="checkbox"/> Other |

How to respond

Standard Workgroup consultation questions

1. Do you believe that CM089 Original proposal better facilitates the Applicable Objectives?
2. Do you support the proposed implementation approach?
3. Do you have any other comments?
4. Do you wish to raise a Workgroup Consultation Alternative request for the Workgroup to consider?

Specific Workgroup consultation questions

5. Do you believe there are any further changes required to the STC based on the proposed changes to the Grid Code as part of GC0156?

The Workgroup is seeking the views of STC Users and other interested parties in relation to the issues noted in this document and specifically in response to the questions above. Please send your response to stcteam@nationalgrideso.com using the response pro-forma which can be found on the [CM089 modification page](#).

In accordance with Governance Rules if you wish to raise a Workgroup Consultation Alternative Request, please fill in the form which you can find at the above link.

³ If the modification has an impact on Article 18 T&Cs, it will need to follow the process set out in Article 18 of the Electricity Balancing Regulation (EBR – EU Regulation 2017/2195) – the main aspect of this is that the modification will need to be consulted on for 1 month in the Code Administrator Consultation phase. N.B. This will also satisfy the requirements of the NCER process.

If you wish to submit a confidential response, mark the relevant box on your consultation proforma. Confidential responses will be disclosed to the Authority in full but, unless agreed otherwise, will not be shared with the Panel, Workgroup, or the industry, and may therefore not influence the debate to the same extent as a non-confidential response.

Acronyms, key terms, and reference material

Acronym / key term	Meaning
BEIS	Department for Business, Energy, and Industrial Strategy
BSC	Balancing and Settlement Code
CMP	CUSC Modification Proposal
CUSC	Connection and Use of System Code
DESNZ	Department for Energy Security and Net-Zero
EBR	Electricity Balancing Guideline
ESO	Electricity System Operator
ESRS	Electricity System Restoration Standard
NETS	National Electricity Transmission System
NIS	Network and Information System
SQSS	Security and Quality of Supply Standards
STC	System Operator Transmission Owner Code
T&Cs	Terms and Conditions

Reference material

- [GC0156: Workgroup Report Annexes \(inclusive of proposed legal text\)](#)

Annexes

Annex	Information
Annex 1	Proposal form
Annex 2	Draft Terms of reference – awaiting April 2023 STC Panel sign off
Annex 3	Draft Legal Text