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| Workgroup Consultation | | | |
| **CM089: Implementation of the Electricity System Restoration Standard**  **Overview:** This Modification is proposing a number of 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**    **Proposal Form**  07 February 2023  **Workgroup Consultation**  25 April 2023 - 18 May 2023  **Workgroup Report**  20 June 2023  **Code Administrator Consultation**  03 July 2023 - 04 August 2023  **Draft Modification Report**  22 August 2023  **Final Modification Report**  19 September 2023  **Implementation**  31 December 2026  **1**  **2**  **3**  **4**  **5**  **6**  **7** | |
| **Have 5 minutes?** Read our [Executive summary](#_Executive_summary_1)  **Have 20 minutes?** Read the full [Workgroup Consultation](#_Why_change?)  **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**  Restoration Service Providers, Generators, Transmission Licensees, Interconnectors, Transmission Owners, Distributed Network Owners, Non-Embedded Customers, 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](mailto: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](mailto:stcteam@nationalgrideso.com) **by 5pm on 18 May 2023** | | |

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# Executive summary

This modification is seeking to clarify the requirements on STC parties taking part in restoration activities as part of the Electricity System Restoration Standard, so that National Grid ESO can satisfy the new ESO Licence obligation.

What is the issue?

The Grid Code is currently being updated through Grid Code Modification GC0156 and the changes proposed to the STC are to align with the Grid Code so that the Electricity System Restoration Standard 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: Restoration Service Providers, Generators, Transmission Licensees, Interconnectors, Transmission Owners, Distributed Network Owners, Non-Embedded Customers, 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](https://www.nationalgrideso.com/industry-information/codes/gc/modifications/gc0156-facilitating-implementation-electricity-system); CUSC [CMP398](https://www.nationalgrideso.com/industry-information/codes/cusc/modifications/cmp398-gc0156-cost-recovery-mechanism-cusc-parties) and [CMP412](https://www.nationalgrideso.com/industry-information/codes/cusc/modifications/cmp412-cmp398-consequential-charging-modification); BSC [P451](https://www.elexon.co.uk/mod-proposal/p451/); and SQSS [GSR032](https://www.nationalgrideso.com/industry-information/codes/sqss/modifications/gsr032-facilitate-implementation-electricity-system).

What is the issue?

In April 2021, the Department for Business, Energy and Industrial Strategy (BEIS[[1]](#footnote-1)) released a [policy statement](https://www.gov.uk/government/publications/introducing-a-new-electricity-system-restoration-standard) 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](https://www.ofgem.gov.uk/publications/consultation-licence-amendments-facilitate-introduction-electricity-system-restoration-standard) in April 2021 followed by a [statutory consultation](https://www.ofgem.gov.uk/publications/statutory-consultation-licence-amendments-facilitate-introduction-electricity-system-restoration-standard-0) 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 24August 2021, Ofgem published a [decision letter](https://www.ofgem.gov.uk/publications/decision-licence-modifications-facilitate-introduction-electricity-system-restoration-standard) 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 are 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 NGESO 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 DESNZ (nee BEIS) 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 taking part in restoration activities, so that National Grid ESO can satisfy the new ESO Licence obligation. The Grid Code is currently being updated through Grid Code Modification GC0156 and the changes proposed to the STC are to align with the Grid Code so that the Electricity System Restoration Standard can be implemented.

This Modification is proposing a number of 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.

What is the solution?

## Proposer’s solution

As part of the solution, the ESO is the Workgroup will:

* Identify aspects of the STC code that must change as a consequence of 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](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.L_.2017.312.01.0054.01.ENG&toc=OJ:L:2017:312:TOC%22)) which was in part introduced to the Grid Code through Grid Code modifications [GC0125](https://www.bing.com/ck/a?!&&p=583beddf96ae23f1JmltdHM9MTY3NTM4MjQwMCZpZ3VpZD0yMjNjNGI1Zi1jNzVlLTY3ZDQtMzcwMy01OWYzYzZiZTY2ODgmaW5zaWQ9NTE3MQ&ptn=3&hsh=3&fclid=223c4b5f-c75e-67d4-3703-59f3c6be6688&psq=GC0125&u=a1aHR0cHM6Ly93d3cubmF0aW9uYWxncmlkZXNvLmNvbS9pbmR1c3RyeS1pbmZvcm1hdGlvbi9jb2Rlcy9ncmlkLWNvZGUtb2xkL21vZGlmaWNhdGlvbnMvZ2MwMTI1LWV1LWNvZGUtZW1lcmdlbmN5LXJlc3RvcmF0aW9uLWJsYWNr&ntb=1), [GC0127](https://www.bing.com/ck/a?!&&p=d815892b1ff1e65dJmltdHM9MTY3NTM4MjQwMCZpZ3VpZD0yMjNjNGI1Zi1jNzVlLTY3ZDQtMzcwMy01OWYzYzZiZTY2ODgmaW5zaWQ9NTE3MA&ptn=3&hsh=3&fclid=223c4b5f-c75e-67d4-3703-59f3c6be6688&psq=GC0127&u=a1aHR0cHM6Ly93d3cubmF0aW9uYWxncmlkZXNvLmNvbS9pbmR1c3RyeS1pbmZvcm1hdGlvbi9jb2Rlcy9ncmlkLWNvZGUtb2xkL21vZGlmaWNhdGlvbnMvZ2MwMTI3LWV1LWNvZGUtZW1lcmdlbmN5LXJlc3RvcmF0aW9u&ntb=1) and [GC0128](https://www.bing.com/ck/a?!&&p=b2172e3863261aefJmltdHM9MTY3NTM4MjQwMCZpZ3VpZD0yMjNjNGI1Zi1jNzVlLTY3ZDQtMzcwMy01OWYzYzZiZTY2ODgmaW5zaWQ9NTE3Nw&ptn=3&hsh=3&fclid=223c4b5f-c75e-67d4-3703-59f3c6be6688&psq=GC0128&u=a1aHR0cHM6Ly93d3cubmF0aW9uYWxncmlkZXNvLmNvbS9pbmR1c3RyeS1pbmZvcm1hdGlvbi9jb2Rlcy9ncmlkLWNvZGUtb2xkL21vZGlmaWNhdGlvbnMvZ2MwMTI4LWV1LWNvZGUtZW1lcmdlbmN5LXJlc3RvcmF0aW9u&ntb=1) and further being implemented through Grid Code modification [GC0148 (Implementation of EU Emergency and Restoration Code Phase II)](https://www.bing.com/ck/a?!&&p=f2c4667b1cc5cd49JmltdHM9MTY3NTM4MjQwMCZpZ3VpZD0yMjNjNGI1Zi1jNzVlLTY3ZDQtMzcwMy01OWYzYzZiZTY2ODgmaW5zaWQ9NTM2NA&ptn=3&hsh=3&fclid=223c4b5f-c75e-67d4-3703-59f3c6be6688&psq=GC0148+(Implementation+of+EU+Emergency+and+Restoration+Code+Phase+II)&u=a1aHR0cHM6Ly93d3cubmF0aW9uYWxncmlkZXNvLmNvbS9pbmR1c3RyeS1pbmZvcm1hdGlvbi9jb2Rlcy9ncmlkLWNvZGUtb2xkL21vZGlmaWNhdGlvbnMvZ2MwMTQ4LWltcGxlbWVudGF0aW9uLWV1LWVtZXJnZW5jeS1hbmQjOn46dGV4dD1HcmlkJTIwQ29kZSUyMEdDMDE0OCUzQSUyMEltcGxlbWVudGF0aW9uJTIwb2YlMjBFVSUyMEVtZXJnZW5jeSUyMGFuZCxDb2RlJTIwJTI4RVUlMjAyMDE3JTJGMjE5NiUyOSUyMCUyOE5DRVIlMjklMjB0byUyME9mZ2VtJTIwZm9yJTIwYXBwcm92YWwu&ntb=1) and [GC0156 (Facilitating the Implementation of the Electricity System Restoration Standard).](https://www.nationalgrideso.com/industry-information/codes/grid-code-old/modifications/gc0156-facilitating-implementation)

This modification will also include additional tools which have been developed through Grid Code modification GC0156 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 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, we need to ensure that these arrangements are also 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**

The ESO representative advised that the draft legal text covers both the GC0156 original solution and WAGCM1, as the differing obligations are placed on Generators, not TOs.

Workgroup member advised that OFTOs are funded differently to TOs, and that OFTOs don’t currently have any mechanisms to recover the costs for restoration, as they don’t have price control and there isn’t anything in their licence. The Proposer advised that Ofgem have been approached with regards to this issue and is still waiting guidance.

The Proposer clarified that Electricity Demand is Transmission Demand, the Proposer advised that it is defined in as National Demand in the Grid Code as part of GC0156.

**Section C: Transmission Services and Operations and Section D: Planning Co-Ordination**

The Workgroup raised/ did not raise concerns with the references of E/CC 7.10, E/CC 7.11, OC 5.7 and OC 9.4.7.6.2 as proposed in the GC0156 text.

**Section K: Technical, Design and Operational Criteria and Performance Requirements For Offshore Transmission Systems**

A Workgroup Member queried whether the 12 months post implementation cut off should be closer to 5-6 years. The ESO representative advised that this looks into the contract purchasing date and not the connection date, and that everything that is designed after this date should incorporate restoration, he also advised that the Grid Code covers the Generators obligations and mirrors the proposed changes in STC, so when the asset is transfers ownership it should have the restoration incorporated.

A Workgroup Member queried that because OFTOs don’t place any contract for main plant and apparatus this is not relevant. The ESO representative advised that as there is a possibility for the OFTO build to emerge, this is suggested as a precaution as it is already covered in Grid Code for Generators.

**Consideration of other options**

*xxxxxxxxxxxxxxxxxxxxxxxxx*

## Draft legal text

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

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| 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 not within Transmission Licence |
| (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 national power outage. |
| (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 national power outage 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 national power outage |
| (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 national power outage. |

**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

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| --- | --- | --- | --- |
| Grid Code | BSC | CUSC | SQSS |
| European Network Codes | ☐ EBR Article 18 T&Cs[[2]](#footnote-2) | Other modifications | ☐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?
5. Do you agree with the Workgroup’s assessment that CM089 does/does not impact the European Electricity Balancing Regulation (EBR) Article 18 terms and conditions held within the STC?
6. Do you have any comments on the impact of CM089 on the EBR Objectives?

## Specific Workgroup consultation questions

1. Xxxxxxxxx

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](mailto:stcteam@nationalgrideso.com) using the response pro-forma which can be found on the [CM089 modification page](https://www.nationalgrideso.com/industry-information/codes/stc/modifications/cm089-implementation-electricity-system-restoration).

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.

*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

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| **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: Facilitating the Implementation of the Electricity System Restoration Standard](https://www.nationalgrideso.com/industry-information/codes/gc/modifications/gc0156-facilitating-implementation-electricity-system)

Annexes

|  |  |
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| **Annex** | **Information** |
| Annex 1 | Proposal form |
| Annex 2 | Terms of reference |
| Annex 3 | Draft Legal Text |

1. BEIS is now referred to as Department for Energy Security and Net-Zero (DESNZ) [↑](#footnote-ref-1)
2. 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. [↑](#footnote-ref-2)