

Draft STCP Modification Proposal Form

PM0128: Implementation of the Electricity System Restoration Standard

Overview: This Modification is proposing a number of changes to the STC Procedures to facilitate Special Condition 2.2 of NGENSO's 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 national.

Modification process & timetable



Status summary: The Proposer has raised a modification and is seeking a decision from the Panel on the Governance route to be taken.

This modification is expected to have a:

High Impact: on Restoration Service Providers, Generators, Transmission Licensees, Interconnectors, Transmission Owners, Non-Embedded Customers and the Electricity System Operator

Who can I talk to about the change?	Proposer: Sade Adenola Sade.adenola@nationalgrideso.com 07748180789	Code Administrator Contact: Ruth Roberts Ruth.Roberts@nationalgrideso.com 07972172169

Contents

Contents	2
Why change?	3
What is the proposer’s solution?	3
Legal text.....	5
What is the impact of this change?	5
Proposer’s assessment against STC Objectives	5
Proposer’s assessment against the STCP change requirements	7
When will this change take place?	7
Implementation date	7
Implementation approach	7
Interactions	7
Panel Determination	8
Acronyms, key terms and reference material	8
Reference material	8

What is the issue?

In April 2021, the Department for Business, Energy and Industrial Strategy (BEIS) 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 24th 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 19th 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 National Grid's Electricity System Operator's Transmission Licence requiring the introduction of 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.

This modification is therefore necessary following a direction issued by BEIS. The date by which 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 of their obligations so that National Grid ESO can satisfy the new ESO Licence obligation. The Grid Code is being updated through Grid Code Modification GC0156 and the changes proposed to the STCPs 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 Procedures to facilitate Special Condition 2.2 of NGEN's 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 national

What is the proposer's solution?

It is proposed to establish a STCP modification Working Group to determine how implementation of the Electricity System Restoration Standard (ESRS) can be facilitated by code modifications.

The ESO's aim for implementation of the ESRS is to put in place measures, tools and procedures such 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 is against the background that the Electricity System is in an intact and operable state and that there is not significant damage to electrical Plant and Apparatus.

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 \(Implementation of EU Emergency and Restoration Code Phase II\)](#) and [GC0156 \(Facilitating the Implementation of the Electricity System Restoration Standard\)](#).

This modification will also include additional tools which have been developed through Grid Code modification GC0156 for the Electricity System Restoration Standard 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 STCPs.

The Proposers solution is to update the STCPs to ensure consistency with the Grid Code changes and recommendations of the GC0156 subgroups which provide the essential tools necessary to achieve the objectives of the ESRs. Much of this Grid Code work, and the related thinking developed as part of the subgroups will be used to develop In addition, it is also proposed to replace all references to 'Black Start' with the term 'Electricity System Restoration' to ensure consistency line with the Licence changes described above. This would also be consistent with the proposals being put forward to change the CUSC and BSC.

The solution will also need to include changes to a number of the STCPs.

Legal text

The Legal text for this solution will be developed on the legal text drafted for GC0156. As part of this modification the following STC Procedures are expected to require updating.

- STCP 04-5 (Operational Telephony)
- STCP 04-6 (Offshore Datalink Functional Specification for Telecontrol Communications Interface)
- STCP 06-1 (Black Start)
- STCP 06-2 (De-Synchronised Island Management)
- STCP 06-3 (System Incident Management)
- STCP 06-4 (Contingency Arrangements)
- STCP08-1 (Protection Testing)
- STCP08-3 (Operational Tests and System Tests)
- STCP08-4 (User Tests)
- STCP 08-3 (Operational Tests and System Tests)
- STCP 11-1 (Outage Planning)
- STCP 11-2 (Outage Data Exchange)
- STCP16-1 (Investment Planning)
- STCP 18-1 (Connection and Modification Application)
- STCP 19-3 (Operational Notification and Compliance Testing)

What is the impact of this change?

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

<p>(b) development, maintenance and operation of an efficient, economical and coordinated system of electricity transmission</p>	<p>Positive</p> <p>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.</p>
<p>(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</p>	<p>Positive</p> <p>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.</p>
<p>(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</p>	<p>Positive</p> <p>Provide assurance of restoring the System following a total or partial national power outage as quickly as possible</p>
<p>(e) promotion of good industry practice and efficiency in the implementation and administration of the arrangements described in the STC</p>	<p>Positive</p> <p>Provide assurance that the new licence obligation issued in Oct 2021 can be efficiently discharged.</p>
<p>(f) facilitation of access to the national electricity transmission system for generation not yet connected to the national electricity transmission system or distribution system;</p>	<p>Positive</p> <p>Provide assurance that the NETS is adequately assessed, designed and maintained to support restoring the System following a total or partial national power outage.</p>

(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.
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Proposer's assessment against the STCP change requirements ¹	Proposer's assessment
(a) the amendment or addition does not impair, frustrate or invalidate the provisions of the Code	Requirement met
(b) the amendment or addition does not impose new obligations or liabilities or restrictions of a material nature on Relevant Parties which are not subsidiary to the rights and obligations of the Relevant Parties under the Code	Requirement met
(c) the amendment or addition is not inconsistent or in conflict with the Code, Transmission Licence Conditions or other relevant statutory requirements	Requirement met
(d) the Relevant Party Representatives deem that the amendment or addition is appropriate to support compliance with the Code	Requirement met

When will this change take place?

Implementation date

Implementation timeline in line with of [GC0156](#)

Implementation approach

New Restoration Decision Support Tool, Local Joint Restoration Plans, Distributed Restoration Zone Plans & Annual Restoration Strategy

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 checked="" type="checkbox"/> Other modifications	<input type="checkbox"/> Other	

This is a consequential change as a result of [GC0156](#)

¹ STCP changes may only be made if they meet the requirements in Section B, 7.3.2

Panel Determination

Party	Determination
National Grid (ESO)	To be updated following Panel determination
National Grid (TO)	To be updated following Panel determination
Offshore Transmission Owners (OFTOs)	To be updated following Panel determination
Scottish Hydro Electric Transmission plc (SHET)	To be updated following Panel determination
SP Transmission Limited (SPT)	To be updated following Panel determination

Acronyms, key terms and reference material

Acronym / key term	Meaning
BEIS	Department for Business, Energy and Industrial Strategy
BSC	Balancing and Settlement Code
CUSC	Connection and Use of System Code
DNO	Distribution Network Operator
EBR	Electricity Balancing Regulation
ESO	Electricity System Operator
ESRS	Electricity System Restoration Standard
EU	European Union
GC	Grid Code
NGESO	National Grid Electricity System Operator
NETS	National Electricity Transmission System
PM	Procedure Modification
RSP	Restoration Service Providers
SQSS	Security and Quality of Supply Standards
STC	System Operator Transmission Owner Code
STCP	System Operator Transmission Owner Code Procedure
T&Cs	Terms and Conditions
TO	Transmissions Owner

Reference material

- [GC0156 Modification](#)