

Emergency and Restoration Network Code Article 4 (2)

Consultation on Update to SONI Terms & Conditions for the Provision of System Defence and System Restoration Services

10 February 2023



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Introduction

Background

Article 7 (1) of the Emergency and Restoration Network Code requires SONI to consult upon and obtain approval from the Regulatory Authority (under Article 4 (2) (a) & (b) of that Network Code) of the Terms and Conditions that apply to the provision of System Defence and System Restoration Services.

SONI initially fulfilled this obligation with consultation exercises resulting in Utility Regulator approval of both documents on 11 February 2021¹. These documents only covered a situation where SONI has full access to all of the services required at all times. This paradigm of abundant system services provided by conventional generation will evolve over the coming years as we transition to a lower carbon system.

A review of the Terms and Conditions for System Defence and System Restoration Services identified that neither document sets out the actions we could take if we anticipate a shortfall in the services required to deliver the System Defence or System Restoration plans, and therefore is contrary to our obligations under Condition 29 of our TSO Licence. This gap is resolved in the versions attached to this consultation.

In addition to SONI's own consultation policy, Article 7 (1) of the Emergency and Restoration Code requires a one month public consultation on any updates to the documents prepared to fulfil the requirements of Article 4 (2) (a) and Article 4 (2) (b).

Once we have considered any responses to this consultation and, if appropriate, reflected any comments in the updated Terms and Conditions, we will submit the final version to the UR for approval.

Purpose

These updated Terms and Conditions will allow SONI to fulfil its obligations under Condition 29 of its TSO licence and facilitate the implementation of the System Defence² and System Restoration³ Plans as the generation portfolio evolves over the coming years. This consultation paper summarises proposed changes to the documents and sets out the reasons why we are proposing these updates. The updated Terms and Conditions required by Article 4 (2) (a) & (b) are published alongside this paper.

How to respond

SONI invites stakeholder comments on the updates to the two Terms and Conditions documents. These should be sent to gridcode@soni.ltd.uk. If confidentiality is required, this should be made explicit in the response, otherwise the submissions will be published on the SONI website.

¹ [2021-02-11 NC ER final Approval Letter.pdf \(uregni.gov.uk\)](#)

² https://www.soni.ltd.uk/media/documents/SONI_System_Defence_Plan_Northern-Ireland.pdf

³ https://www.soni.ltd.uk/media/documents/SONI_System_Restoration_Plan_NorthernIreland.pdf

We will consider all consultation responses before finalising the documents. The final documents will be approved by the Utility Regulator. Therefore, SONI will include a report on this consultation exercise when we make the submission to UR. We will also include all responses that we receive within that submission.

The closing date for responses is 5pm on 10 March 2022.

Update to Terms and Conditions for System Restoration Services

Context

In line with Article 4 (2) (b) of the Emergency and Restoration Network Code, the UR approved the initial version of these Terms and Conditions on 11 February 2021, and that version is published on SONI's website⁴. That initial version of the Terms and Conditions assumed that SONI would automatically have access to sufficient black start services because provision of these services is mandatory for certain units under their connection agreements, with the technical requirements specified in Connections Conditions Schedule 1.1.4, and Operating Codes 7.4.4 & 7.4.6.6 of the Grid Code.

However, it is possible that the assumption of sufficient provision of black start services as a direct result of Grid Code compliance may not always hold true. Condition 29 of its TSO Licence obliges SONI to contract for the provision of such quantities and types of System Support Services as may be appropriate to enable it to discharge its obligations under the Order, the Energy Order, the SEM Order and the Licence. This obligation includes procurement of sufficient black start services. Section OC7.4.6.8 of the Grid Code also outlines a situation where SONI might enter into specific contracts for black start services. SONI has therefore updated these Terms and Conditions to resolve this inconsistency by including a scenario where "SONI would specify conditions for aggregation and or target geographical distribution of Black Start services".

Importance of Black Start Services

The process to restart the power system in Northern Ireland is set out in SONI's System Restoration Plan, prepared in accordance with Article 23 of the Emergency and Restoration Network code. We do not propose any changes to that plan within this review.

Black start units have the ability to start up without an external power supply from the grid. During a blackout, the power system in Northern Ireland is split into three subsystems, a Ballylumford island, a Kilroot island and a Coolkeeragh island. Each subsystem must have at least one black start unit. Once each subsystem has supply restored to enough customers to allow multiple generators to operate stably, those subsystems are joined together to form a single system and restoration continues. Synchronising facilities are available at each black start location for this purpose.

It is important to have enough black start units in Northern Ireland to ensure there is no delay to system restoration efforts during a blackout and to ensure redundancy should any black start unit be unavailable for any reason. The location of black start units is also important as this ensures that restoration to all parts of the power system can be achieved and in the most expedient way possible.

Baseline Situation

Under normal conditions, based on the requirements of the Emergency and Restoration Code and the specific requirements for users connecting to the transmission system, the terms and conditions

⁴ [SONI TermsandConditionsRestoration NorthernIreland.pdf](#)

to act as a Restoration Service Provider are held in the existing national legal framework, as opposed to in a specific contract.

SONI does not propose any additional modifications to the existing SONI Grid Code clauses and does not propose to specify conditions at this time for aggregation or target geographical distribution of Black Start services, unless there is a potential shortfall in the provision of services available to SONI.

Action When Shortfall Anticipated

The amount and availability of Black Start generation is kept under review and if the availability of Black Start generation were to change materially, SONI would specify conditions for aggregation and/or target geographical distribution of Black Start services. Any location specific terms and conditions would be aligned with the technical provisions set out in the Grid Code and would include commercial terms approved by the Utility Regulator on a case by case basis, in line with its statutory duties set out in Article 12 of the Energy (Northern Ireland) Order 2003 and Article 8 of the Emergency and Restoration Network Code.

SONI anticipates that the commercial terms would be limited to those which reflect market conditions and therefore would not be considered to be more favourable than those that might reasonably be available on the market. If appropriate, SONI or the UR might undertake benchmarking of the prices included in the contract to ensure that the payments correspond to a market price in the context of the technical circumstances pertaining at the time.

In the event that the updated Terms and Conditions are not approved, SONI will need to further engage with the UR in order to address how SONI are to meet their obligations under Condition 29 of their TSO Licence, in this regard.

Views Requested

SONI welcomes stakeholder views on the update⁵ to these terms and conditions that enables SONI to fulfil its obligations under Condition 29 of our Licence and Section OC7.4.6.8 by including an option for SONI to act, when it anticipates a potential shortfall in Black Start capability in Northern Ireland, noting that the UR will assess the costs of any contract that we propose and will only approve cost recovery if it is consistent with its duties, as set out in Article 12 of the Energy Order (NI) 2003 and Article 8 of the Emergency and Restoration Network Code.

⁵ <https://www.soni.ltd.uk/media/documents/SONI-T+C-for-System-Restoration-Update-February-2023-FINAL.pdf>

Update to Terms and Conditions for System Defence Services

Context

The UR approved the initial version of these Terms and Conditions on 11 February 2021, and that version is published on SONI's website⁶. The initial version of the Terms and Conditions assumed that SONI would automatically have access to sufficient system defence services because provision of these services is inherent in the performance of certain units and historically SONI had access to an abundance of these services with sufficient geographical diversity.

However, it is possible that the assumption of sufficient provision of System Defence services as a direct result of Grid Code compliance may not always hold true. Condition 29 of its TSO Licence obliges SONI to contract for the provision of such quantities and types of System Support Services as may be appropriate to enable it to discharge its obligations under the Order, the Energy Order, the SEM Order and the Licence. This obligation includes procurement of sufficient system defence services. SONI has therefore updated these Terms and Conditions to resolve this inconsistency by including a scenario where SONI would specify conditions for aggregation and or target geographical distribution of system defence services.

Importance of System Defence Services

There are many variables in a complex synchronous electrical system and the TSO operates within certain limits to ensure standards are maintained. These limits are defined in System Operator Guidelines (SOGL) and are enacted in the Operational Security Standards (OSS).

The transmission system is operated so that under normal operation and in the event of certain anticipated contingencies (loss of any single item of generation or transmission plant (N-G, or N-1) there will be no:

- Loss of supply, subject to certain exceptions
- Frequency event outside the operational limits
- Voltage conditions outside the operational limits
- Transmission plant operating outside its limits
- System instability

System Defence services allow the TSO to operate the power system in a safe and secure manner.

Baseline Situation

Under normal conditions, based on the requirements of the Emergency and Restoration Code and the specific requirements for users connecting to the transmission system, the provision of inertia as a System Defence Service is inherent within compliance with the existing national legal framework, as opposed to in a specific contract.

⁶ [SONI TermsandConditionsRestoration NorthernIreland.pdf](#)

SONI does not propose any additional modifications to the existing SONI Grid Code clauses and does not propose to specify conditions at this time for the aggregation of System Defence Services, including inertia, unless there is a potential shortfall in the provision of services available to SONI.

Action When Shortfall Anticipated

However, the amount and availability of inertia is kept under review and if the availability and geographical distribution of inertia providing generation was to change materially, SONI would specify conditions to target the geographical distribution of inertia provision. Any location specific terms and conditions would be aligned with the technical provisions set out in the Grid Code and would include commercial terms approved by the Utility Regulator on a case by case basis, in line with its statutory duties.

SONI anticipates that the commercial terms would be limited to those which reflect market conditions and therefore would not be considered to be more favourable than those that might reasonably be available on the market. If appropriate, SONI or the UR might undertake benchmarking of the prices included in the contract to ensure that the payments correspond to a market price in the context of the technical circumstances pertaining at the time.

In the event that the updated Terms and Conditions are not approved, SONI will need to further engage with the UR in order to address how SONI are to meet their obligations under Condition 29 of their TSO Licence, in this regard.

Views Requested

SONI welcomes stakeholder views on the update⁷ to these terms and conditions that creates a scenario that enables SONI to fulfil its obligations under Condition 29 of our Licence, including an option for SONI to act when it anticipates a potential shortfall in inertia provision, including its geographical diversity, noting that the UR will assess the costs of any contract that we propose and will only approve cost recovery of it is consistent with its duties, as set out in Article 12 of the Energy Order (NI) 2003 and Article 8 of the Emergency and Restoration Network Code.

⁷ <https://www.soni.ltd.uk/media/documents/SONI-T+C-for-System-Defence-Update-February-2023-FINAL.pdf>

Next Steps

This consultation will remain open until 10 March 2023. SONI will review all responses received and submit its final version of the terms and conditions for provision of both sets of services to the UR for approval under the Emergency and Restoration Network Code alongside the responses received and SONI report on the consultation.

The approved terms and conditions will be published on SONI's website.