

Alan Campbell
SONI Limited
Castlereagh House
12 Manse Road
Belfast
BT6 9RT

23 March 2023

Our Ref: NET/E/RMcL/645

Dear Alan

RE: SONI Limited - Derogation to the TSSPS in relation to voltage step change limits for the Castlereagh, Kells, Drumkee and Mullavilly Batteries

Background:

The Authority¹ has decided to grant SONI a derogation from applying the limits set out in Section 6.4 (Table 6.2) of the current Transmission System Security and Planning Standards (TSSPS), P28 – ‘Issue 1’.

The Direction (the **Existing Batteries Direction**) and our reasons for making it are fully set out in this Decision Letter and an Annex to the Letter, both of which we will also publish.

Condition 20(2) of SONI’s TSO Licence (the **SONI Licence**) obliges it to plan, operate, co-ordinate and direct the electricity system in accordance with the (TSSPS). Condition 20 (6) gives the Utility Regulator (the **Authority**) the power to “*issue directions relieving the Licensee of its obligations under paragraph 2 in respect of such parts of the transmission system and to such extent as may be specified in the directions.*”

We have considered whether upon making the Direction we should exercise our power under Condition 20 (6) to relieve SONI of its obligations relevant to the TSSPS.

¹ In this letter (and the direction found at the Annex) the words “Authority” “we” “our” “us” and “UR” are used interchangeably to refer to the Northern Ireland Authority for Utility Regulation.

The TSSPS

SONI, in the application for Derogation dated 2 February 2023, outline how the TSSPS is based on a number of professional standards adopted in Great Britain, including Energy Networks Association (“ENA”) Engineering Recommendation P28 (P28). This “sets guidelines for voltage fluctuations and the connection of disturbing equipment to Transmission Systems and Distribution Networks in the United Kingdom.” The current regulatory approved version of this was published in 2015 (P28 – what SONI describe as ‘Issue 1’ in the application). In 2018, P28 was revised, including changes to voltage step change limits (SONI describe this version as ‘Issue 2’). The P28 (Issue 1) values still apply as part of the current TSSPS, in Section 6.4 and Table 6.2.

As part of SONI’s 2023 Forward Work Plan, the TSSPS will be reviewed and updated, including “moving from P28 (Issue 1) to P28 (Issue 2). NIE Networks has already adopted P28 (Issue 2) at the Distribution level.” SONI will consult with stakeholders on these proposed changes to the TSSPS, and seek the Authority’s approval of these updates.

Currently, all the four batteries referred to in the Application exceed the allowed limits for voltage step change associated with re-energisation of a transformer as set out in P28 (Issue 1). The four existing batteries are:

- Drumkee Energy Limited’s Drumkee Battery (connected to Drumkee 110 kV Substation) - 8% voltage step change for transformer re-energisation
- Mullavilly Energy Limited’s Mullavilly Battery (connected to Mullavilly 110 kV Substation) – 7.1%
- Belfast Energy Storage Company Limited’s Castlereagh Battery (connected to Lisnabreeny 110 kV Substation – 4.99%.
- Kells BES Limited’s Kells Battery (connected to Connor 110 kV Substation) – 6.9%.

SONI have confirmed in the Application that the Existing Batteries comply with P28 (Issue 2) for voltage step change, wish to apply for a derogation from applying the limits set out in the current TSSPS (Issue 1), and “request instead that SONI applies the limits that reflect P28 (Issue 2) to the Existing Batteries and SONI further requests that this derogation remains in place until SONI has reviewed and adopted the new limits associated with P28 (Issue 2) in an updated version

TSSPS. Work on updating the TSSPS is currently scheduled for completion in July 2023.”

In SONI’s description of why all the batteries listed above exceed the allowed limits for voltage step change, it says that “each of the customers refer to P28 in their compliance studies (part of the User Data Library provided in the pre-energisation process). They have assumed that SONI has already moved to the newer standard, as with Great Britain. In addition the SONI Compliance Statement refers to SONI Grid Code CC.5.4 – wording which refers to supply standards and voltage variations. CC5.4.2 states that the design criteria in respect of voltage fluctuations and unbalance shall be in accordance with the Licence Standards i.e. TSSPS (with reference to P28).”

One alternative action SONI has identified in the application is not using the four battery sites until the full TSSPS revision is complete. SONI consider this “disproportionate” and would create a “significant cost to the consumer and reduction of system service provisions.”

Another potential alternative action identified is “to update only the TSSPS reference from P28_1 to P28_2. This would divert resources from the fuller review,” and in SONI’s opinion, the derogation proposed “is a more efficient approach for all relevant organisations.”

SONI state in the application they would not recommend either of the alternative actions they have considered.

Consultation

SONI have included consultation with affected parties as part of the request:

Low Carbon stated that “we support this derogation and can confirm that we do not see a technical impact to the battery and its associated components including transformers, switchgear and protection relays. Our pre-energisation studies determined compliance with P28_2s limits...”

ABO commented that “ABO support this derogation and can confirm that we do not see a technical impact to the battery and its associated transformer,

switchgear and protection relays. Our pre-energisation studies determined compliance with P28_2s limits.”

Energia comment that “Energia fully supports this derogation and can confirm that no technical impact to the battery, associated transformer, switchgear and protection relays is expected. The pre-energisation studies carried out by our technical teams determined compliance with the limits set out in P28_2, and determined that there would be no material or operational impact to the equipment. Energia are happy to support this derogation.”

NIE Networks stated that “the studies completed by SONI detail the maximum voltage dip at 8% for the battery sites. Based on this I’m ok for them to go ahead but if any issues arise it will have to be revisited. In the interim can you provide the expected number of operations. Also it would be useful to have the sites monitored for a period of time to verify the studies.”

The Authority’s Decision

We have considered the matters outlined in the Direction, our published 2017 Guidance on derogations² and our principal objective and general statutory duties as set out in Article 12 of the Energy (NI) Order 2003. We have also taken into account the fact SONI is supportive of the making of a requisite direction, including that SONI has engaged with the connectees (who support the Derogation request) and NIE Networks (who have stated that they do not perceive issues to existing equipment with the voltage step changes quoted, but that if any issues arise, this will need revisited). We have noted SONI state in the application that customers were not aware of the fact the TSSPS has not yet been revised to incorporate the P28 (Issue 2) standards, and SONI should consider how this is effectively communicated in future. That application for derogation raises issues around compliance with Condition 20, that the Authority will write to SONI separately about.

However, as the existing batteries are already within the limits set out by P28 (Issue 2), it appears to be the most practical option to grant this application for derogation.

² [Guidance Document on Derogations - February 2017.pdf \(uregni.gov.uk\)](#).

Having considered these matters the Authority has decided to grant the Derogation request by the making of an appropriate direction in exercise of its power under Condition 20 (6) of the SONI Licence, being satisfied that the derogation request is for the reasons offered by SONI, and is justified. The Direction:

- (a) is attached as an Annex to this letter
- (b) applies from 00.00 GMT on the date of issue of this decision
- (c) relieves SONI of any obligation it has to comply with, implement (or enforce) the limits as set out in Section 6.4 (Table 6.2) of the current TSSPS which reflect P28 (Issue 1);
- (d) ceases to apply on and from the date that SONI has adopted the new limits associated with P28 (Issue 2), in an updated version of the TSSPS, or such earlier date that the Authority shall determine by further direction.

For the avoidance of doubt, the direction now given only relieves SONI from its Condition 20(2) licence obligation to plan, operate, co-ordinate and direct the electricity system in accordance with the TSSPS, in respect of implementing the limits as set out in Section 6.4 (Table 6.2) of the current TSSPS.

The direction shall be entered and maintained in the Electronic Register,

Yours sincerely,



Roisin McLaughlin
Head of Network Operations

ANNEX

DIRECTION UNDER CONDITION 20(6) OF THE LICENCE TO PARTICIPATE IN TRANSMISSION OF ELECTRICITY HELD BY SONI LIMITED

TO: SONI Limited

Whereas:

- A. SONI Limited (“**SONI**”) (“**the Licensee**”) holds an electricity transmission licence (the “**Licence**”) granted to it on 3 July 2007.
- B. Condition 20(2) of SONI’s Licence obliges it to plan, operate, co-ordinate and direct the electricity system in accordance with the Transmission System Security and Planning Standards (TSSPS).
- C. Condition 20(6) gives the Authority the power to ‘issue directions relieving the Licensee of its obligations under paragraph 2 in respect of such parts of the transmission system and to such extent as may be specified in the directions.’
- D. The Authority has now made a direction (the **Existing Batteries Direction**)³ granting SONI relief under Condition 20(6) of SONI’s transmission licence from its obligation under Condition 20(6) of the SONI Licence to plan, operate, co-ordinate and direct the electricity system in accordance with the Transmission System Security and Planning Standards (TSSPS), as they apply to:
- Drumkee Energy Limited’s operation of the Drumkee 110 kV Substation
 - Mullavilly Energy Limited’s operation of the Mullavilly Battery connected to the Mullavilly 110 kV Substation
 - Belfast Energy Storage Company Limited’s operation of the Castlereagh Battery connected to the Lisnabreeny 110 kV Substation
 - Kells BES Ltd’s operation of the Kells Battery connected to the Conor 110 kV Substation.

³ The Existing Batteries Direction and the accompanying letter setting out the Authority’s reasons for making the CESB Direction have been published and may be found on the UR website.

for the period commencing 00.00 GMT on the date of issue of this decision and ending when an updated version of the TSSPS is issued (being the “**relevant period**”).

The Authority now directs as follows:-

1. The Authority hereby directs that – pursuant to the power in Condition 20(6) of the Licence, the Licensee is relieved of its obligation(s) under Condition 20(2) of the Licence to implement, comply with (and enforce) those clauses of the TSSPS set out in Section 6.4 (Table 6.2), in respect of the operation of the four batteries which are specified in the Existing Batteries Direction.
2. The Authority may revoke, vary or replace this direction by a further Direction before the end of the relevant period.
3. The reasons for this direction are set out in a letter accompanying and published with it.

Signed:



Name: Roisin McLaughlin
Head of Network Operations

Date: 23 March 2023

Duly authorised by and on behalf of the Northern Ireland Authority for Utility Regulation