

SONI Limited,  
Castlereagh House  
12 Manse Road  
Belfast  
BT6 9RT

Ref: NET/E/DH/634

Date: 16 February 2023<sup>1</sup>

Dear Sarah

**RE: Derogations under Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a network code on requirements for grid connection of generators (NC RfG)**

On 16 August 2022, SONI, in its capacity as transmission system operator for Northern Ireland, submitted to the Authority<sup>2</sup> four requests for the grant of derogations in respect of specified requirements of the NC RfG.

The requests were made in accordance with Article 63(2) of the NC RfG, and each of them was supported by a statement of reasons and by a cost-benefit analysis.

We have carefully considered the requests made by SONI together with the supporting documentation. We have sought the views of NIE Networks on those requests. Regard too has been had to the fact that substantively equivalent derogations were approved by the CRU<sup>3</sup> in response to a request made by EirGrid (as transmission system operator for the Republic of Ireland (**Rol**)) in respect of the Rol transmission network (**the CRU Decision**).<sup>4</sup>

We are satisfied in all the circumstances that it is appropriate that derogations should be granted in accordance with the terms specified below.

Therefore, the Authority, in accordance with Article 63(6) of the NC RfG, hereby grants the derogations set out in the following table –

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<sup>1</sup> This is the date the Authority adopted the decision on the requests for derogation

<sup>2</sup> In this letter (and the Appendix 1) the words “Authority”, “us” and “our” are used interchangeably and refer to the Northern Ireland Authority for Utility Regulation.

<sup>3</sup> The CRU (the Commission for the Regulation of Utilities) is the relevant regulatory authority for the Republic of Ireland.

<sup>4</sup> The CRU Decision is here: [CRU20127-Derogations-and-RfAs-under-Connection-Network-Codes.pdf](https://www.cru.ie/~/media/00000000-0000-0000-0000-000000000000/CRU20127-Derogations-and-RfAs-under-Connection-Network-Codes.pdf)

### Derogations granted under Article 63(6)

Article of NC RfG	Subject	Class of Power-Generating Module (PGM) to which the Derogation Applies	Duration
15.2(d)(i) and (ii)	Frequency Sensitive Mode ( <b>FSM</b> ) Parameters	Type C (with a registered capacity of 5MW or more)  Type D Synchronous Power-Generating Modules ( <b>SPGMs</b> )  Type D Power Park Modules ( <b>PPMs</b> )  Offshore PPMs connected to the transmission system	Indefinite
15.2(d)(iii)	FSM Frequency Response Capability	Type C (with a registered capacity of 5MW or more)  Type D SPGMs  Type D PPMs  Offshore PPMs connected to the transmission system	Indefinite
16.2(a)(i)	Voltage Withstand Capability	Type D PGMs	Indefinite
18.2(b)(i)	Maximum Reactive Voltage	Type D SPGMs	Indefinite
21.3(b)(i) and (ii)		Type D PPMs	
25.5		Offshore PPMs connected to the transmission network	

It should be noted that the derogations have been granted on an “indefinite” rather than “permanent” basis (as described by SONI in its requests for derogation). We refer here to our published guidance/criteria on derogations from Network Code obligations (2017)<sup>5</sup> which states that derogations can be “definite” “lifetime” or “indefinite”.

Granting each derogation on an “indefinite” basis is practically aligned with the request made by SONI. It is also aligned with the terms of Article 63(11) of the NC RfG which provides that a decision to grant a derogation might itself be revoked by the Authority<sup>6</sup> if (i) the circumstances and underlying reasons for the relevant decision no longer apply or (ii) on foot of a reasoned recommendation by the Commission or ACER<sup>7</sup> in pursuance of Article 65(2) of the NC RfG.

The facility specifically provided for in Article 63(11) means that it is unnecessary to make the grant of each derogation conditional, save insofar as it relates only to certain categories of PGM.

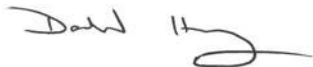
Article 63(8) of NC RfG requires the Authority to issue a reasoned decision concerning any request for a derogation. **Appendix 1** to this letter sets out our reasoning for the decisions to grant each derogation as specified above. In large part, our reasons for granting the derogations requested by SONI are similar to those given by the CRU in the CRU Decision, and reflect the justifications advanced by SONI in its request for the derogations.<sup>8</sup>

The derogations shall be effective on and from the date of this letter.

This letter (including its Appendix) will be placed on the Electricity Register<sup>9</sup> and published on the Authority’s website.

The Authority expects SONI to progress any related changes to the Grid Code as soon as practicable.<sup>10</sup>

Yours sincerely



**Donald Henry**

**Networks and Energy Futures Director**

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<sup>5</sup> [Guidance Document on Derogations - February 2017.pdf \(uregni.gov.uk\)](#)

<sup>6</sup> As the relevant regulatory authority.

<sup>7</sup> The Authority is obliged by Article 63(9) of NC RfG to notify the Agency as to the decision to grant the derogations requested by SONI.

<sup>8</sup> It is not understood that either ACER or the Commission has made any recommendation in respect of the CRU Decision. Our assumption is that the Commission and ACER are each content with the CRU Decision and the underlying reasons given for it.

<sup>9</sup> The Authority acknowledges the obligation to maintain a *Register of Derogations*: see Article 64 of the NC RfG.

<sup>10</sup> The requests for derogations made by SONI include reference to proposed changes to the Grid Code should each relevant request be approved by the Authority.

## APPENDIX 1

### REASONS FOR THE APPROVAL OF REQUESTS FOR DEROGATION MADE BY SONI (AS TRANSMISSION SYSTEM OPERATOR FOR NORTHERN IRELAND) ON 16 AUGUST 2022

#### *The derogations requested by SONI*

Four derogations were requested; each detailed in a separate submission made to the Authority on 16 August 2022. Each submission provided a detailed statement of the reasons for the request, together with background information.

The requests in relation to: (a) Articles 15.2(d)(i) and (ii); and (b) Article 15.2(d)(iii), were each further supported by a document entitled 'Supporting Cost Benefit Analysis for Frequency Related Conditions'.

The requests in relation to: (a) Article 16.2(a)(i); and (b) Articles 18.2(b)(i), 21.3(b)(i) and (ii), and 25.5, were each further supported by a document entitled 'Supporting Cost Benefit Analysis for Voltage Related Conditions'.

#### *Interaction with NIE Networks Limited (NIE Networks) on the SONI requests for derogation*

The Authority sought the opinion of NIE Networks (in its capacity as owner and operator of the Northern Ireland distribution network and owner of the Northern Ireland transmission network) on SONI's requests for derogation.

NIE Networks, by letter dated 1 September 2022, confirmed that it supported the requests for derogations.

The Authority notes, from the terms of the letter, that NIE Networks appeared to understand that the derogations had been requested only in respect of Type D PGMs, which was not strictly correct. While the requests do largely relate to units of this nature, they also cover some other types of PGM, as specified in the table granting the derogations in this letter. In giving due weight to the opinion of NIE Networks, the Authority also notes and makes allowance for this error.

#### *Regulatory framework*

In making the decision on each of the requests for derogation submitted by SONI, the Authority had due regard and given all appropriate weight to:

- (a) the NC RfG<sup>11</sup>, including the context and purposes of that document read as a whole, and specifically the provisions from which derogation was sought

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<sup>11</sup> The NC RfG stands as a directly applicable and binding instrument under the arrangements provided for in section 7A of the European Union (Withdrawal) Act 2018.

- (b) our published Guidance on Derogations (2017)<sup>12</sup>
- (c) the CRU Decision
- (d) the information, reasons and supporting materials provided by SONI as part of its requests
- (e) the opinion of NIE Networks.

The Authority notes, in particular, that each of the derogation requests was supported by what SONI described as a 'qualitative' cost benefit analysis. Each of the cost benefit analyses identified (i) no discernible benefit to maintaining in force (without derogation) the specified provisions of the NC RfG in respect of which derogation was sought, and (ii) various categories of disbenefit likely to arise from doing so.

The Authority further notes that Article 7 of the NC RfG provides that those applying the NC RfG shall apply *inter alia* the principle of proportionality.

Having regard to all of these matters, the Authority's reasons for granting each of the derogations specified in the table in this letter are set out below.

### ***Derogation 1. Articles 15 (2) (d)(i) and (ii)***

The derogation requested in relation to these provisions of the NC RfG is stated by SONI to be in respect of the following classes of PGM:

'Type D SPGMs, Type C (with a Registered Capacity of 5 MW or more) and Type D PPMs and offshore PPMs connected to the transmission system.'

The CRU Decision includes the following:

'This Article requires the TSO to specify a mandatory parameter called active power range ( $\Delta P/P_{max}$ ) with a range of 1.5% to 10% for continuous FSM. EirGrid [has] received confirmation that this was included in error by ENTSO-E and have started the process through the CNC WG to have this amended in the next iteration of [NC RfG]. Despite this, a derogation is still required until the next release of [NC] RfG and should be granted given that this is an error.'

SONI's derogation request makes a similar case. It includes the following:

'The TSO does not believe that an active power value should be specified for continuous (not time limited) FSM operation as governor droop defines the amount of active power that is provided by the PGM.'

ENTSO-E stated that an update to Table 4 of Article 15 to remove this parameter will be incorporated as part of the next iteration of the RfG. However, it should be noted that the next iteration of the RfG will not be retrospectively applied."

"Compliance with the requirements set out in 15.2.d (i) and (ii) would reduce SONI's ability to operate the system at within current frequency standards and SNSP levels. Therefore, the derogated values (which maintain our current Grid Code standards) will allow us to maintain the current frequency requirements. In turn this will improve the future ability of the system to operate safely and securely at System Non-Synchronous Penetration (SNSP) levels further to

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<sup>12</sup> [Guidance Document on Derogations - February 2017.pdf \(uregni.gov.uk\)](#)

75%. This derogation will have a beneficial impact on system operation across the island of Ireland.

Failure to grant this derogation will also impact all-island operation of the power system as the equivalent derogation has been granted in Ireland [by the CRU Decision]. Not only will this introduce differing operational policy and complexity in between both jurisdictions but Ireland will also be able to make better use of renewable energy flexibility while the frequency response of renewables in NI will be greatly limited due to the [NC] RfG article in question.'

Having regard to the CRU Decision, the Authority is satisfied that these reasons are valid, and accepts and adopts the rationale set out by SONI. In the light of those reasons the Authority considers that the granting of a derogation is both justified and proportionate in all the circumstances. The Authority has therefore granted the derogation for an indefinite period in respect of the classes of PGM specified in the request.

### ***Derogation 2. Article 15(2)(d)(iii)***

The derogation requested in relation to this provision of the NC RfG is stated by SONI to be in respect of the following classes of PGM:

'Type D SPGMs, Type C (with a Registered Capacity of 5 MW or more) and Type D PPMs and offshore PPMs connected to the transmission system.'

The CRU Decision includes the following:

'Article 15.2(d)(iii) states that Type D PPMs and off-shore PPMs connected to the transmission system (currently none connected to the Irish system) must be capable of providing an active power range of 1.5%–10% in response to a step change in frequency. However, these RfG frequency response requirements for Type D PPMs and off-shore PPMs are significantly less than the existing Grid Code PPM frequency response requirements, as defined in Grid Code Version 8.0 PPM1.5.3.3.'

SONI's request for a derogation makes clear that the same situation effectively applies in Northern Ireland, and that maintaining a common approach across both jurisdictions is highly desirable:

'To achieve the future targets beyond 40% RES-E, while maintaining the necessary system security, it is essential that the existing Grid Code requirement for PPMs to be capable of providing a 60% increase in Active Power within 5 seconds and 100% of the expected increase (droop response) within 15 seconds of the frequency event (step change), is also applied to PPMs which are subject to RfG.'

Compliance with the requirements set out in 15.2.d (iii) would reduce SONI's ability to securely operate the power system particularly at high levels of SNSP. Therefore, the derogated values (which maintain our current Grid Code standards) will allow us to maintain the current frequency requirements. In turn this will improve the future ability of the system to operate safely and securely at the current System Non-Synchronous Penetration (SNSP) levels of up to 75%. This derogation will have a beneficial impact on system operation across the island of Ireland and ultimately end consumers.

The derogation is vital to facilitate operation of the system at the SNSP levels required to achieve the decarbonisation targets set by the NI Executive.

Failure to grant this derogation will also impact all-island operation of the power system as the equivalent derogation has been granted in Ireland. Not only will this introduce differing operational policy and complexity in between both jurisdictions but Ireland will also be able to make better use of renewable energy flexibility while the frequency response of renewables in NI will be greatly limited due to the RfG article in question.'

Having regard to the CRU Decision, the Authority is satisfied that these reasons are valid, and accepts and adopts the rationale set out by SONI. In the light of those reasons the Authority considers that the granting of a derogation is both justified and proportionate in all the circumstances. The Authority has therefore granted the derogation for an indefinite period in respect of the classes of PGM specified in the request.

### ***Derogation 3. Article 16.2(a)(i)***

The derogation requested in relation to this provision of the NC RfG is stated by SONI to be in respect of the following class of PGMs:

'Type D RfG Generation Units connected to the Transmission System.'

The CRU Decision includes the following:

'[The Article would require units] connected to the Transmission System at 220kV to be capable of continually withstanding 246kV. 220kV connections are designed to meet IEC standards (IEC 61936) and hence are rated to continually withstand a maximum of 245kV.

Having reviewed the derogation, the CRU feels it should be granted for the following reasons:

- This is a class derogation (i.e. it will apply to all generator types);
- In order to comply, 220 kV transmission-connected Users would have to purchase expensive new equipment, for which no benefit can be seen; and
- Other countries have applied for similar derogations, and it is thought that this issue will be amended in the next iteration of the 3 connection codes (DCC, RfG and HVDC).'

SONI's justification for requesting a derogation relies on the same reasoning applied in the context of Northern Ireland:

'Under the existing Grid Code CC5.4.1 the transmission system shall remain within the limits set out in the Electricity Safety, Quality and Continuity Regulations, i.e. +/-10% of the nominal value.

Further to this equipment for 275 kV connections, such as circuit breakers and busbar disconnects, are designed and rated to withstand a maximum of 302.5 kV on a continuous basis. To meet the RfG requirement of 307.45 kV, higher rated equipment is needed. This is an unnecessary technical requirement for 275 kV installations. As this issue arose from a value used in Table 6.1 of RfG, TSOs across the EU will be submitting similar derogations to this one to their respective NRAs.'

Having regard to the CRU Decision, the Authority is satisfied that these reasons are valid, and accepts and adopts the rationale set out by SONI. In the light of those reasons The Authority considers that the granting of a derogation is both justified and proportionate in all the circumstances. The Authority has therefore granted the derogation for an indefinite period in respect of the class of PGMs specified in the request.

#### ***Derogation 4. Articles 18.2(b)(i), 21.3(b)(i) and (ii) and 25.5***

The derogation requested in relation to this provision of the NC RfG is stated by SONI to be in respect of the following classes of PGM:

'Type D SPGMs, Type D PPMs and offshore PPMs connected to the transmission system.'

The CRU Decision includes the following:

'Under RfG Article 16, Type D power-generating modules must have a maximum withstand voltage at the connection point of 1.118 p.u. for voltages between 110kV and 300kV. However, under Articles 18.2(b)(i), Article 21.3(b)(i) & (ii) and Article 25.5, synchronous power-generating modules, power park modules and AC-connected offshore power park modules must have maximum reactive voltage at the connection point of 1.100 p.u. for voltages between 110kV and 300kV.'

ENTSO-E have informed EirGrid that this was included in error, and have shared confirmation of this with the CRU.'

In accord with this position, SONI's justification for requesting a derogation also relies upon its understanding that the requirements of the relevant provisions were specified in error:

'It has become apparent that there is an error in Article 18 Figure 7 and Article 21 Figure 8. The maximum voltage included in these diagrams is 1.1 p.u. whilst Article 16 Table 6.1 and Article 25 Table 10 show a maximum voltage withstand capability of 1.118 p.u. for connections greater or equal 110 kV and below 300 kV. It is incorrect that the reactive power capability range required at the connection point would be less than the withstand voltage that is defined at the connection point. This is expected to be remedied for the next iteration of RfG Network Code.'

Having regard to the CRU Decision, the Authority is satisfied that these reasons are valid, and accepts and adopts the rationale set out by SONI. In the light of those reasons the Authority considers that the granting of a derogation is both justified and proportionate in all the circumstances. The Authority has therefore granted the derogation for an indefinite period in respect of the classes of PGM specified in the request.

#### ***Duration***

The Authority notes that all four of the derogation requests received from SONI refer to the grant of a derogation '*for generation applying for connection after 27 April 2019.*'

This is capable of being read as a request that the derogations should be granted with retrospective effect in respect of PGMs which fall within the specified types and sought connection after the specified date. Whether or not this was the intention, the Authority does not consider that it has the power to grant derogations with retrospective effect. The legal position is that derogations cannot come into force earlier than the date on which they are granted by the adoption of the requisite decision; in this case 16 February 2023.

The Authority notes that there was no suggestion of the CRU Decision being made on any other basis than that it had effect on and from the date on which it was made.

Accordingly, the derogations granted shall come into effect only on and from the date on which the decision was adopted by the Authority for the purposes of Article 63(6) of the NC RfG, namely **16 February 2023**.