Submission Document

Significant Grid Users Northern Ireland

In accordance with the requirements of Articles 11 and 4.2 (c) and (d) of the Commission Regulation (EU) 2017/2196 Establishing a network code on electricity emergency and restoration

16th October 2020

SONI

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1. Background

COMMISSION REGULATION (EU) 2017/2196, establishing a Network Code on Electricity Emergency and Restoration (NCER) came into force on the 18th of December 2017. This network code details the requirements for TSO's to develop business policies to manage emergency events on the power system. As part of the requirements of NCER, a Significant Grid User (SGU) has been defined in NCER. This document details all SGU's as defined in NCER.

This document fulfils the requirements Article 4.2(c) and (d) and Article 11 of NCER.

2. Significant Grid User

2.1 Definition of SGU

The definition of a Significant Grid User, as detailed in Article 2 of NCER, is defined as;

a. existing and new power generating modules classified as type C and D in accordance with the criteria set out in Article 5 of Commission Regulation (EU) 2016/631 (3);

Synchronous Area	Limit for maximum capacity threshold from which a power- generating module is of type B	Limit for maximum capacity threshold from which a power-generating module is of type C	Limit for maximum capacity threshold from which a power-generating module is of type D[1]
Ireland and Northern Ireland	0.1 MW	5 MW	10 MW

b. existing and new power generating modules classified as type B in accordance with the criteria set out in Article 5 of Regulation (EU) 2016/631, where they are identified as SGUs in accordance with Article 11(4) and Article 23(4);
c. existing and new transmission-connected demand facilities;
d. existing and new transmission connected closed distribution systems;
e. providers of redispatching of power generating modules or demand facilities by means of aggregation and providers of active power reserve in accordance with Title 8 of Regulation (EU) 2017/1485; and

[1] Note, all power generating modules connected at 110kV and above are Type D at whatever capacity.

f. existing and new high voltage direct current ('HVDC') systems and direct current-connected power park modules in accordance with the criteria set out in Article 4(1) of Commission Regulation (EU) 2016/1447 (1).

SONI has not identified any transmission connected closed distribution systems, transmission connected demand facilities or existing and new power generating modules classified as type B as a category of SGU on the system.

SONI has not identified any High Priority Significant Grid Users under the requirements of NCER.

2.2 List of System Defence Measures to be Implemented by SGUs

All system defence services provided by SGUs as per Articles 15 to 22 of the NCER are listed in table 1 below. To help with the mapping of SGUs to system defence services the six definitions of SGUs given in section 2.1, have been expanded to eight, where Type C & D generators are three separate categories, namely Type D (transmission connected), Type D (distribution connected) and Type C. Also, for completeness, the system defence measures that impact non-SGUs, such as distributed demand customers, has been included in the mapping table.

			SGUs								Non-SGUs
NCER Article	NCER Chapter II Section 2 Technical & Organisational Measures	Individual System Defence Measure / Service	Type D Generator (T-Connected)	Type D Generator (D-Connected)	Type C Generator	Type B Generator	Aggregators of Gen/ Dem	T -Conn Demand Facility	Interconnector Owners	T-Conn closed Distribution Systems	DSO Demand Customers
15	Automatic Under Frequency Control Schemes	LFLSS (Low Frequency Load Shedding Scheme									X*
16	Automatic Over-Frequency Control Schemes	Over Frequency Generator Shedding Scheme		X	X						
		Step wise linear disconnection	X	X	X						
17	Automatic Scheme Against Voltage Collapse	UVLS (Under Voltage Load Shedding)									X**
18	Frequency Deviation Management Procedure	Operational Reserve (FRR)	X	X	X		X				
		Replacement Reserve (RR)	X	X	X		X				
		Active power set points when Frequency is outside Alert Limits.	X	X	X		X				
		Authority to disconnect SGUs	X	X	X		X		X		
19	Voltage Deviation Management Procedure	Reactive power set-points	X								
		Other TSO's making Mvars available							X		
20	Power Flow Management Procedure	Active power set points when power flow is outside Alert Limits.	X	X	X		X				
		Special Protection Schemes	X	X	X						
21	Assistance for Active Power Procedure	Active power set points when system adequacy is lacking.	X	X	X		X				
		Interconnectors Emergency Assistance (MWs)							X		
22	Manual Demand Disconnection Procedure	Emergency load shedding (Inc. Rota)									X*

* Unless Protected
** At locations designated by the TSO

Table 1 - Mapping of SD Services against SGUs/ Non- SGUs

2.3 List of System Restoration Measures to be Implemented by SGUs

SONI has agreements in place with three transmission connected power stations to provide Black Start capability as a system restoration service. Details of this service can be found in GridCode CC.S1.1.4 and OC7.

In addition to Black Start capability the only other system restoration service is the ‘quick resynchronisation’ service where generator units trip to house load following loss of external supply and remain available to resynchronise when the external supply is restored. The requirements are detailed under Grid Code OC7.5.4.

3. Next Steps

This concludes SONI's Significant Grid Users list for Northern Ireland in accordance with the requirements of Articles 11 and 4.2 (c) and (d) of the Commission Regulation (EU) 2017/2196 Establishing a network code on electricity emergency and restoration.

SONI would now like to request the approval of the UR for this document.