

## GRID CODE MODIFICATION FORM

### Signal Requirements

This modification aims to clarify SONI's signal requirements. Following consultation with industry through the Demand Side Unit Joint Grid Code Working Group the following modification was unanimously agreed among Demand Side Unit Joint Grid Code Working Group members at the 5th meeting which took place via teleconference on 09/05/2014.

**GRID CODE SECTION(S) AFFECTED BY PROPOSAL: Definitions, CC13.3**

**Demand Side Unit MW Capacity**

The maximum change in **Active Power** that can be achieved by a **Demand Side Unit** on a sustained basis for the duration of the **Demand Side Unit's Maximum Down Time** by totalling the potential increase in on-site **Active Power Generation** and the potential decrease in on-site **Active Power Demand** at each **Individual Demand Site**.

**DSU Short-term Synchronous Operating Mode** The operation of **Generating Unit(s)** at an **Individual Demand Site** of a **Demand Side Unit** where the **Generating Unit(s)** supplies **Demand Customer's** or **DSO Demand Customer's Load** while not **Synchronised** to the **Transmission System** or **Distribution System**. The **Generating Unit(s)** is(are) **Synchronised** to the **Transmission System** or **Distribution System** for short periods of time at **Start-Up** and **Shutdown** of the **Generating Units(s)** to facilitate a smooth transfer of power.

**Maximum Export Capacity**

The value (in **MW, MVA, kW** and/or **kVA**) provided in accordance with the **User's Connection Agreement** or **DNO Demand Customer's DNO Connection Agreement**.

CC13.3 Signals and indications required to be provided by **Demand Side Unit Operators** will include but shall not be limited to the following:

- (a) total aggregated **Demand Side Unit MW Response** from **Generation operating as a continuous Synchronous Generating Unit**;
- (b) aggregated **Demand Side Unit MW Response** from **Generation operating as a continuous Synchronous Generating Unit per Bulk Supply Point, as required by the TSO**;
- (c) total aggregated **Demand Side Unit MW Response** from avoided **Demand consumption and Generation** operating in **DSU Short-term Synchronous Operating Mode**;
- (d) aggregated **Demand Side Unit MW Response** from avoided **Demand consumption and Generation** operated in **DSU Short-term Synchronous Operating Mode per Bulk Supply Point, as required by the TSO**;
- (e) Remaining **Demand Side Unit MW Availability**;
- (f) **Demand Side Unit MW Response** from each **Individual Demand Site** with a **Demand Side Unit MW Capacity** of greater than or equal to 5 MW;

- (g) **MW Output** from **Generation Units** with a capacity greater than or equal to 5 MW;
- (h) Mvar output from **Generation Units** with a capacity greater than or equal to 5 MW at **Individual Demand Sites** with a **Maximum Export Capacity** specified in the **Connection Agreement** or **DNO Connection Agreement** as applicable, as required by the TSO;
- (i) Aggregate **MW Output** from **Generation Units** with a combined **Capacity** of greater than or equal to 5 MW on an **Individual Demand Site**, as required by the TSO; and
- (j) **Demand Side Unit MW Response** from each **Individual Demand Site** that comprises the **Demand Side Unit**, as required by the TSO.

CC.13.4 **Demand Side Unit Operators** shall provide the TSO the specification of the method of aggregation of SCADA from multiple sites. The minimum specifications shall be agreed with the TSO in advance and shall include:

- (a) signals from **Demand Side Unit Operators** shall be relayed to the TSO telemetry outstation interface which reflect the **Demand Side Unit MW Response** to an accuracy of within 1 MW of the actual **Demand Side Unit MW Response** within 15 seconds of change occurring to the **Demand Side Unit MW Response**; and
- (b) a single failure of an item of the **Demand Side Unit Operator's** equipment will not result in:
  - (i) loss of control of more than one **Individual Demand Site**;
  - (ii) loss of **Demand Side Unit MW Response** of more than one **Individual Demand Site**; or
  - (iii) the **Demand Side Unit MW Response** from generation or **Demand Side Unit MW Response** from avoided **Demand** consumption signals being incorrect by more than the **Demand Side Unit MW Capacity** of the **Individual Demand Site** with the highest **Demand Side Unit MW Capacity** comprising the **Demand Side Unit**.

**Approval**

Having regard to the outcome of the review described in the Consultation Report dated 6<sup>th</sup> February 2015, SONI proposes the revisions to the SONI Grid Code set out above, which revisions we reasonably think fit for the achievement of the objectives referred to in sub-paragraph (b) of paragraph 1 of Condition 16 of the Licence. SONI asks the Authority to approve these amendments to the SONI Grid Code pursuant to paragraph 3 of Condition 16 of the Licence.

SIGNED BY



..... 15 April 2015

for and on behalf of

SONI Limited