

MODIFICATION PROPOSAL FORM



DSU FREQUENCY REQUIREMENTS – MPID 254

FORM GC1, PROPOSAL OF MODIFICATION TO GRID CODE.

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MODIFICATION PROPOSAL ORIGINATOR:	EirGrid		
MODIFICATION PROPOSAL ORIGINATOR (CONTACT NAME)	Séamus Power	MODIFICATION PROPOSAL ORIGINATOR FAX NUMBER:	
MODIFICATION PROPOSAL ORIGINATOR TELEPHONE NUMBER:	01 2370522	DATE:	12/05/2014
MODIFICATION PROPOSAL ORIGINATOR E-MAIL ADDRESS:	seamus.power@eirgrid.com	MODIFICATION PROPOSAL NUMBER (EIRGRID USE ONLY)	MPID 254
GRID CODE SECTION(S) AFFECTED BY PROPOSAL:	CC.7.4, Definitions		
GRID CODE VERSION :	Version 5		
MODIFICATION PROPOSAL DESCRIPTION (MUST CLEARLY STATE THE DESIRED AMENDMENT, ALL TEXT/FORMULA CHANGES TO THE GRID CODE. THE REQUIRED REASON FOR THE MODIFICATION MUST STATED. ATTACH ANY FURTHER INFORMATION IF NECESSARY.)	Following consultation with industry through the Demand Side Unit Joint Grid Code Working Group the following modification was proposed by EirGrid. It provides less onerous frequency requirements for Generation that operates as part of a Demand Side Unit that only synchronises for short periods of time to facilitate the smooth transfer of power. A vote among Demand Side Unit Joint Grid Code Working Group members at the 5 th meeting which took place via teleconference on 09/05/2014 was divided with eleven members in favour of the modification and two against.		
IMPLICATION OF NOT IMPLEMENTING THE MODIFICATION	This modification is required to give clarity to DSU Operators on EirGrid's frequency requirements for Generation that operates as part of a Demand Side Unit.		
<i>Please submit the Modification Proposal by fax, post or electronically, using the information supplied above</i>			
EIRGRID REVIEWER			
EIRGRID ASSESSMENT			

Frequency Requirements for Generation Units operating as part of a DSU

CC.7.4 Each **Demand Side Unit** shall, as a minimum, have the following capabilities:

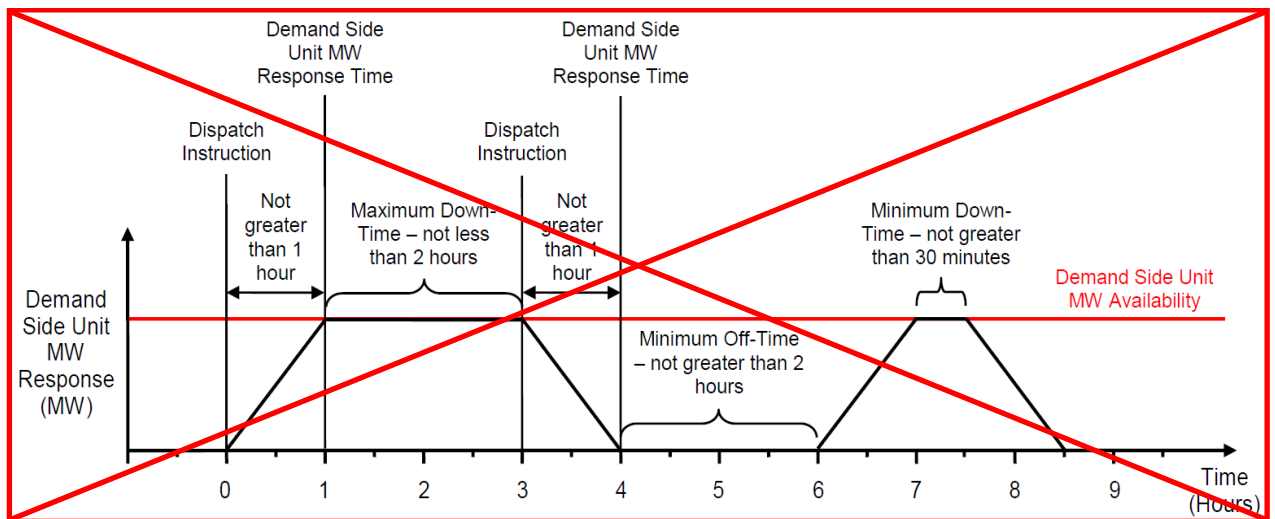
- (a) Able to provide **Demand Side Unit MW Response** between 0 MW and the **Demand Side Unit MW Capacity**;
- (b) **Maximum Ramp Up Rate** not less than 1.67% per minute of **Demand Side Unit MW Response** as specified in the **Dispatch Instruction**;
- (c) **Maximum Ramp Down Rate** not less than 1.67% per minute of **Demand Side Unit MW Response** as specified in the **Dispatch Instruction**;
- (d) **Minimum Down Time** not greater than 30 minutes;
- (e) **Maximum Down Time** not less than 2 hours;
- (f) **Minimum off time** not greater than 2 hours; and
- (g) **Demand Side Unit MW Response Time** of not greater than 1 hour.

On-site **Generation** operated in **Continuous Parallel Mode** or **Shaving Mode** that forms part of a **Demand Side Unit**, shall, as a minimum, have the following capabilities:

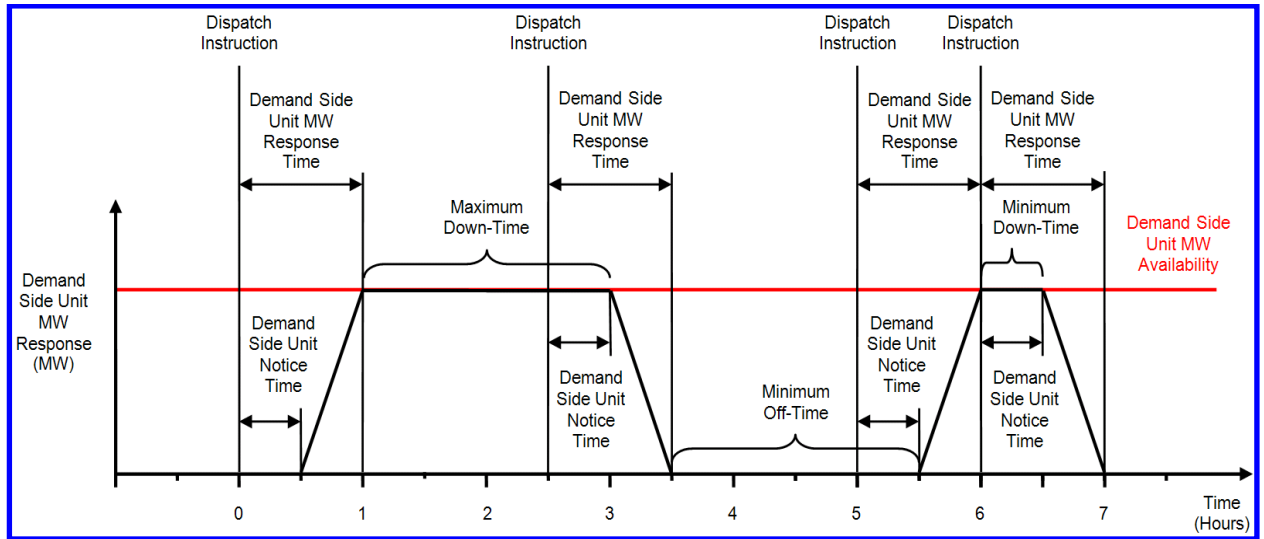
- (h) operate continuously at normal rated output at **Transmission System Frequencies** in the range 49.5Hz to 50.5Hz;
- (i) remain synchronised to the **Transmission System** at **Transmission System Frequencies** within the range 47.5Hz to 52.0Hz for a duration of 60 minutes;
- (j) remain synchronised to the **Transmission System** at **Transmission System Frequencies** within the range 47.0Hz to 47.5Hz for a duration of 20 seconds required each time the **Frequency** is below 47.5Hz; and
- (k) remain synchronised to the **Transmission System** during a rate of change of **Transmission System Frequency** of values up to and including 0.5 Hz per second.

On-site **Generation** operated in **Lopping Mode** or **Automatic Mains Failure Mode** that forms part of a **Demand Side Unit**, shall, as a minimum, have the following capabilities:

- (l) operate continuously at normal rated output at **Transmission System Frequencies** in the range 49.5Hz to 50.5Hz;



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<p>Automatic Mains Failure Mode</p>	<p>The operation of Generation Unit(s) at an Individual Demand Site of a Demand Side Unit where in the event of Disconnection, the Generation Unit(s) is(are) enabled and supplies(y) the Demand Customer's or DSO Demand Customer's Load while not Synchronised to the Transmission System or Distribution System. Upon sustained restoration of the connection to the Transmission System or Distribution System for a settable period of time, the Generation Unit(s) Synchronise to the Transmission System or Distribution System for a short period of time not exceeding 180 seconds to facilitate the smooth transfer of power prior to Shutdown of the Generation Unit(s).</p>
<p>Continuous Parallel Mode</p>	<p>Unrestricted periods of Synchronised operation of Generation Unit(s) to the Transmission System or Distribution System at an Individual Demand Site of a Demand Side Unit, subject to Connection Agreement or DSO Connection Agreement conditions.</p>
<p>Demand Side Unit MW Capacity</p>	<p>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.</p>
<p>Demand Side Unit Notice Time</p>	<p>The time as specified by the Demand Side Unit Operator in the Technical Parameter and is the time it takes for the Demand Side Unit to begin ramping to the Demand Side Unit MW Response from receipt of the Dispatch Instruction from the TSO.</p>
<p>Lopping Mode</p>	<p>The operation of Generation Unit(s) at an Individual Demand Site of a Demand Side Unit where the Generation Unit(s) supplies the Demand Customer's or DSO Demand Customer's Load while not Synchronised to the Transmission System or Distribution System. The Generation Unit(s) is(are) Synchronised to the Transmission System or Distribution System for short periods of time not exceeding 180 seconds at Start-Up and Shutdown of the Generation Unit(s) to facilitate a smooth transfer of power.</p>
<p>Shaving Mode</p>	<p>The Synchronised operation of Generation Unit(s) to the Distribution System at an Individual Demand Site of a Demand Side Unit where the Generation Unit(s) supplies part of, or, the DSO Demand Customer's entire Load. Normally the Generation Unit(s) would operate for 2 hours per day as agreed with the DSO.</p>