Market Readiness Certificate

Specification of Requirements

23 November 2023

EirGrid SONI

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Revision History						
Revision	**Date**	**Description**	**Originator**	**Reviewer**	**Checker**	**Approver**
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R1						
R2						

1. Introduction

1.1. Glossary

AGU	Aggregated Generator Unit.
DSU	Demand Side Unit.
ESPS	Energy Storage Power Station, such as battery units connected to the Transmission or Distribution System.
FON	Final Operational Notification issued by the relevant TSO or DSO when a User completes Grid Code Compliance process, demonstrating compliance with the relevant Grid Code or Distribution Code.
HVDC	High Voltage Direct Current. Within this document HVDC is used in the context of an interconnector.
ION	Interim Operational Notification issued by the TSO, giving a User permission to use the power system for a defined period of time.
PPM	Power Park Module, meaning a wind farm, solar farm or non-synchronous energy storage power station.
PSS	Power System Stabiliser, incorporated into the voltage regulation system of most large SPGMs.
RfG	European Network Code Requirements for Generators, which informs the Northern Ireland and Ireland Grid Codes.
SPGM	Synchronous Power Generating Module, such as hydro or gas-powered generators as found in conventional power stations.
TSO	Transmission System Operator *i.e.* SONI for Northern Ireland or EirGrid for Ireland.

1.2. Purpose of this document

This document sets out the requirements for the TSOs to issue a Market Readiness Certificate.

The TSOs may revise these requirements in future. Any questions regarding this document should be directed to generator_testing@SONI.ltd.uk or generator_testing@eirgrid.com.

1.3. Applicability of Market Readiness Certificate

The following table sets out the relevance of a Market Readiness Certificate for different Unit categories.

Technology	**Applicability**
SPGMs	Yes
Battery ESPS	Yes
Renewable PPMs	Yes
HVDC Interconnectors	Yes
Aggregators (DSU & AGU)	Not Applicable *
Offshore PPMs	Requirements are yet to be determined. The sections below will be expanded to include Offshore PPMs, as applicable

*Market Readiness Certificate is not applicable to Aggregators (DSU & AGU). The existing requirements for aggregators to achieve Operational Certificate are broadly in line with the requirements for other technologies to achieve Market Readiness Certificate. Depending on the MW size, type and topology, SPGM requirements may also apply to individual generators that make up the Aggregator.

2. Requirements for Market Readiness Certificate

Market Readiness Confirmation will only be issued by the TSO following request by an eligible Unit. The Unit must give the TSO prior notice that they intend to request a Market Readiness Certificate, including target date for Market Readiness Certificate. A minimum of two weeks must be allowed for the TSO to review or issue any reports and coordinate the relevant checks and data sharing across multiple teams. Any revisions to reports or requests for clarifications will require an additional two weeks upon receipt of the updated report or information.

TSO will issue a Market Readiness Certificate to a Unit once the following items are complete:

No.	Requirement	Complete
1.	ION has been issued and has not expired.	
2.	The Unit is registered in the SEM.	
3.	Online verification of SCADA signals is complete (or post-energisation signals and controls check complete). This applies for all signals relevant to safe operation and dispatch, including active and reactive power controls, where applicable.	
4.	Capacity Test is complete (or Registered Capacity test, where applicable). The associated report has been submitted by the Unit and approved by the TSO.	
5.	Declaration of Readiness from OEM, to include that the following: a) Unit has been operated stably over the full operating range; b) Unit is fit and ready for secure, stable dispatch over the following operating range: X-Y MW–and ±Z Mvar [customer to specify stable operating range]; c) Functioning of reactive power limiters has been tested; and d) Where the Unit has a Power System Stabiliser (PSS): PSS is commissioned and enabled in line with OEM studies, or PSS is disabled in line with OEM studies. The TSO reserves the right to witness stable operation over the specified operating range, before issuing a Market Readiness Certificate.	
6.	Program of work to complete all testing and reporting requirements to achieve FON before expiry of ION to be submitted by the Unit	

For Battery ESPS or Renewable PPMs, demonstration of stable operation over the operating range may be confirmed via Operational Readiness Confirmation issued by TSO, to include:

a) MW control demonstrated over operating range;
b) Mvar control demonstrated, where applicable; and
c) EDIL dispatch demonstrated for Battery ESPS.

3. Testing Requirements for FON

The TSOs have set out the minimum requirements for a Market Readiness Certificate for an eligible Unit. Nothing in the above removes the requirement under the Grid Code for an FON to be achieved.

For each technology, the list of requirements, test execution and pass requirements vary depending on the connection type, topology, and jurisdiction, therefore it is not practical to list the requirements for FON in this document. Please refer to published EON, ION, FON Checklists, Schedule of Tests, or Power Generating Module Document (PGMD) for specific requirements.