Market Readiness Certificate

Specification of Requirements

15 March 2024

EirGrid SONI

Contents

Revision History		
Revision	**Date**	**Description**
R0	23 November 2023	For publication
R1	15 March 2024	Update following industry feedback

1. Introduction

1.1. Glossary

AGU	Aggregated Generator Unit
DSU	Demand Side Unit
EON	Energisation Operational Notification
ESPS	Energy Storage Power Station
FON	Final Operational Notification
HVDC	High Voltage Direct Current
ION	Interim Operational Notification
OEM	Original Equipment Manufacturer
PPM	Power Park Module
PSS	Power System Stabiliser
RfG	European Network Code Requirements for Generators
SPGM	Synchronous Power Generating Module
TSO	Transmission System Operator

1.2. Purpose of this document

This document sets out the requirements for the relevant TSO 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 applicability of a Market Readiness Certificate for different technologies.

Technology	Applicability
SPGMs	Applicable
Battery ESPS	Applicable
Renewable PPMs	Applicable
HVDC Interconnectors	Applicable
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

Table 1 – Applicability of Market Readiness Certificate

*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

A Market Readiness Certificate will only be issued by the relevant TSO following a request by a Generator or Interconnector Owner. The TSOs recommend that the Generator or Interconnector Owner also provide prior notice that it intends to request a Market Readiness Certificate, including a target date for issuance of the Market Readiness Certificate. A failure to do so may result in delays in the processing of the request.

Following receipt of a request for a Market Readiness Certificate, a minimum of two weeks must be allowed for the relevant 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.

The relevant TSO will issue a Market Readiness Certificate to a Generator or Interconnector Owner once the following items are complete in respect of the Generation Unit or Interconnector:

No.	Requirement	Complete
1.	ION has been issued and has not expired.	
2.	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.	
3.	Capacity test is complete (Registered Capacity test, where applicable). The associated report has been submitted by the Generator or Interconnector Owner and approved by the relevant TSO (including MWh capacity for ESPS).	
4.	Declaration by a Director of the Generator or Interconnector Owner, to include the following: a) [Generation Unit or Interconnector name as per Connection Agreement] is ready for stable operation over the following operating range: X-Y MW and -A to +B Mvar [customer to specify stable operating range]; b) Functioning of reactive power limiters has been tested; and c) Where the Generation 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 relevant TSO reserves the right to witness stable operation over the specified operating range, before issuing a Market Readiness Certificate.	
5.	Current programme of work to complete all testing and reporting requirements to achieve FON before expiry of ION has been submitted by the Generator or Interconnector Owner.	

Table 2 – Requirements for Market Readiness Certificate

Note: For Battery ESPS or Renewable PPMs, demonstration of stable operation over the operating range may be confirmed via Operational Readiness Confirmation issued by the relevant 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 above the minimum requirements for a Market Readiness Certificate. Nothing in the above alters the requirement under the Grid Code for a FON to be achieved.

For each technology, the list of requirements, test execution and pass criteria 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.

4. Indicative Market Readiness Certificate Template

This Market Readiness Certificate is effective as of [Date].

[Generation Unit or Interconnector name as per Connection Agreement] has achieved an EON and an ION which has not expired. [Generation Unit or Interconnector name as per Connection Agreement] has demonstrated sustained export up to XX MW and import of up to YY MW, with a capacity of ZZ MWh. **[export and import are both applicable for battery ESPS and HVDC, demonstrated MWh capacity is applicable for batteries]**. The Registered Capacity established for [Generation Unit or Interconnector name as per Connection Agreement] is XX MW.

The Generator or Interconnector Owner has declared [Generation Unit or Interconnector name as per Connection Agreement] ready for stable operation over the following operating range: X-Y MW and -A to +B Mvar. This declaration is included in Appendix 1.

The Generator or Interconnector Owner has not yet demonstrated full Grid Code Compliance through completion of the FON Checklist **[Ireland]** / completion of the Commissioning/Acceptance Tests and updated Planning Code data **[Northern Ireland]**. This process is to be completed before the ION expires.

Yours sincerely,

Appendix 1 - Declaration

Declaration of readiness (requirement #4 in Table 2, above),

Appendix 2 – Tests Completed

Completed Requirements table (Table 2, above).

Appendix 3 – Program of Work to achieve FON

Program of work to achieve FON before expiry of ION.