Grid Code Modification Recommendation Form	

Title of Recommended Proposal: Clarification of Curve 1 and Curve 2

MPID (EirGrid Use Only): 343

Date:	3rd of February 2026
Recommended at GCRP Meeting:	25th of September 2025
Grid Code Version:	15
Grid Code Section(s) Impacted by Recommended Proposal:	• Definitions • PPM1.5.3.6 • PPM1.5.3.7 • PPM1.7.1.5

The Reason for the Recommended Modification:

A number of focused updates are being proposed to the Grid Code to improve clarity around Power-Frequency Curve 1 and curve 2, particularly within the definition of Resource Following Mode. The current wording does not clearly distinguish the operational characteristics of curve 1, which has led to ambiguity in its interpretation. The revised definition explicitly outlines the behaviour of Controllable PPMs under both curves, clarifying the distinct frequency response characteristics associated with each curve. Additionally, reference tables associated with the Power-Frequency Curves are being updated to better reflect values that are already applied in custom and practice, ensuring consistency between Grid Code documentation and how it is operationally implemented.

History of Progression through GCRPs, Working Group and/or Consultation:

This modification proposal was presented at the September 2025 GCRP meeting. The proposal was discussed in detail during the meeting, with feedback received from several GCRP members. A revised version of the proposal was circulated following the meeting, incorporating the feedback received. As no objections are raised, the TSO have proceeded to the issuing the Recommendation paper to the CRU.

Summary Note of any Objections to the Recommended Change from GCRP Members or Consultation Responses:

No formal objections were raised during the GCRP meeting. However, several clarifications and suggestions were made regarding the graphical representation of the Power-Frequency Curves. These included:

- A query from Tony regarding the red and green lines on the graph (no further comments were noted).
- Paul suggested removing the grid lines to reduce confusion.
- William highlighted the absence of units on the Y-axis as a source of confusion.
- In addition to this the TSO proposed adding in disclaimer that this graph is for illustrative purposes only.

These points were addressed through agreed action items and were reflected in the revised proposal. No objections were raised to the revised proposal.

Outcome of any GCRP Meeting Actions Relating to the Recommended Modification:

The following actions were agreed upon during the meeting:

- **Add units back to the Y-axis** of the Power-Frequency Curve graph.
- **Include a disclaimer** indicating the graph is for illustrative purposes only.
- **Remove grid lines** from the graph to improve clarity.
- **Clarify and circulate a revised modification proposal** incorporating the above changes and feedback from members.
- Members were invited to provide feedback on the revised proposal. No objections are raised, therefore the TSO will issue this recommendation paper to the CRU.

A Table Outlining the Proposed Changes:

<table>
<tr><th>Section</th><th>Red Line Version Text
Deleted text in ~~strike through red font~~ and new text highlighted in blue font</th><th>Green Line Version Text</th></tr>
<tr><td>Definitions</td><td>
<table>
<tr><td>Resource Following Mode</td><td>A mode of operation of a Controllable PPM, with the exception of ESPSs, where the system frequency is within F_B-F_C, according to the active power-frequency response curve in operation (curve 1 or curve 2) and the Controllable PPM is not under Active Power Control by the TSO. ~~allowing the Controllable PPM to produce up to 100% of its Available Active Power, depending on the Power-Frequency Curve in operation.~~

In power-frequency response curve 1 the Controllable PPM adjusts its Active Power output to produce up to 100% of its Available Active Power.
In power-frequency response curve 2 ~~When operating on Power-Frequency Curve 2,~~ the Controllable PPM is required to maintain its Active Power output at a fixed percentage of its Available Active Power. ~~when Transmission System Frequency is within the range FB-FC.~~
</td></tr>
</table>
</td><td>
<table>
<tr><td>Resource Following Mode</td><td>A mode of operation of a Controllable PPM, with the exception of ESPSs, where the system frequency is within F_B-F_C, according to the active power-frequency response curve in operation (curve 1 or curve 2) and the Controllable PPM is not under Active Power Control by the TSO.

In power-frequency response curve 1 the Controllable PPM adjusts its Active Power output to produce up to 100% of its Available Active Power.
In power-frequency curve 2 the Controllable PPM is required to maintain its Active Power output at a fixed percentage of its Available Active Power.
</td></tr>
</table>
</td></tr>
</table>

PPM1.5.3.2

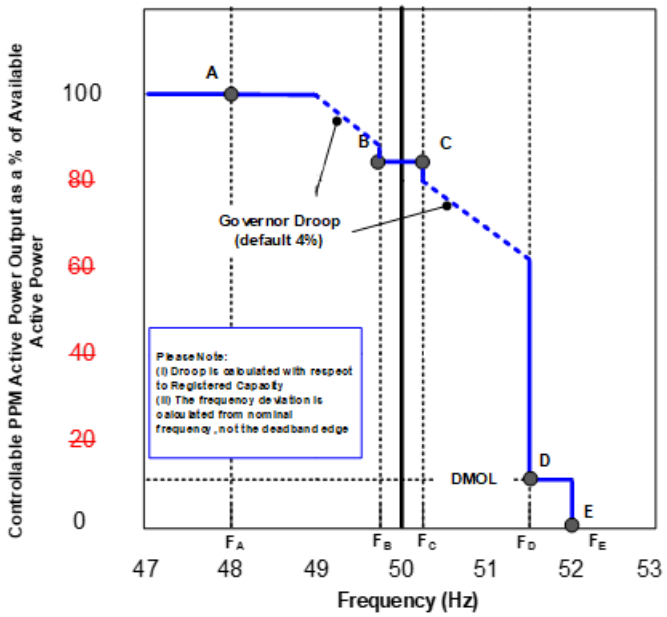

Figure PPM 1.5.3.1.b–Example of *Power-Frequency Response Curve 2* for **Resource Following Mode**

This graph is for illustration purposes only

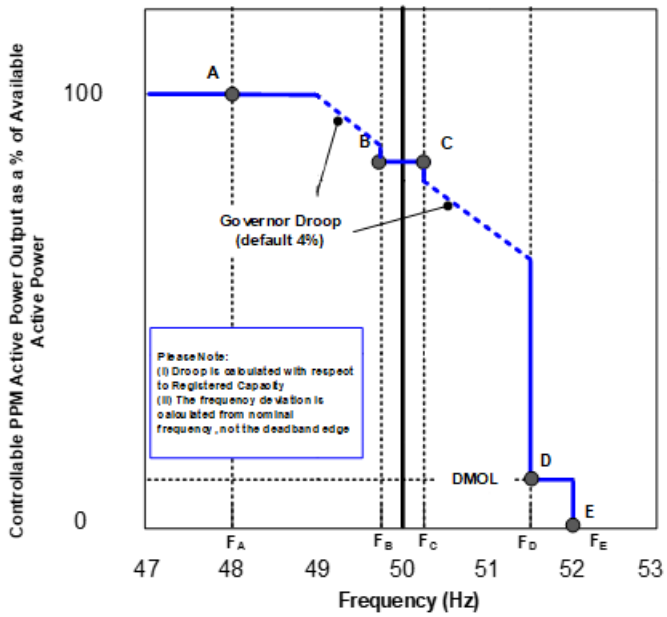

Figure PPM 1.5.3.1.b–Example of *Power-Frequency Response Curve 2* for **Resource Following Mode**

This graph is for illustration purposes only

PPM1.5.3.6

Point	***Transmission System Frequency*** *(Hz)*	***Controllable PPM Active Power*** *Output*
A	F_A	P_A *=100% % of* ***Available Active Power***
B	F_B	Minimum of [fix spacing]: P_B or **Active Power Control Set-point** ~~(converted to a % of **Available Active Power**)~~
C	F_C	Minimum of: P_C or **Active Power Control Set-point** ~~(converted to a % of **Available Active Power**)~~
D	F_D	Minimum of: P_D **or** **Active Power Control Set-point** ~~(converted to a % of **Available Active Power**)~~
E	F_E	P_E = 0 %

Point	***Transmission System Frequency*** *(Hz)*	***Controllable PPM Active Power*** *Output*
A	F_A	P_A *=100% % of* ***Available Active Power***
B	F_B	Minimum of: P_B or **Active Power Control Set-point**
C	F_C	Minimum of: P_C or **Active Power Control Set-point**
D	F_D	Minimum of: P_D **or** **Active Power Control Set-point**
E	F_E	P_E = 0 %

Table PPM 1.5.3.6: ***Transmission System Frequency*** *and* ***Controllable PPM Active Power*** *Output Settings for the Points 'A', 'B', 'C', 'D' and 'E' illustrated in Figure PPM 1.5.3.1.b.*

<table>
<tr><td></td><td>Table PPM 1.5.3.6: Transmission System Frequency and Controllable PPM Active Power Output <s>% Available Active Power</s> Settings for the Points ‘A’, ‘B’, ‘C’, ‘D’ and ‘E’ illustrated in Figure PPM 1.5.3.1.b.</td><td></td></tr>
<tr><td>PPM1.5.3.7</td><td>
<table>
<tr><td></td><td>Transmission System Frequency (Hz)</td><td></td><td>Percentage of Available Active Power (%)</td></tr>
<tr><td></td><td></td><td></td><td>Registered Capacity ≥ 5 MW</td></tr>
<tr><td>F_A</td><td rowspan="4">47.0-49.5</td><td>P_A</td><td><s>50</s> 100</td></tr>
<tr><td>F_B</td><td>49.5-50</td><td>P_B</td><td rowspan="2">15-100</td></tr>
<tr><td>F_C</td><td>50-50.5</td><td>P_C</td></tr>
<tr><td>F_D</td><td>P_D</td><td><s>15-100 but not less than</s> DMOL</td></tr>
<tr><td>F_E</td><td>50.5-52.0</td><td>P_E</td><td>0</td></tr>
</table>
</td><td>
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<tr><td></td><td></td><td></td><td>Registered Capacity ≥ 5 MW</td></tr>
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<tr><td>F_B</td><td>49.5-50</td><td>P_B</td><td rowspan="2">15-100</td></tr>
<tr><td>F_C</td><td>50-50.5</td><td>P_C</td></tr>
<tr><td>F_D</td><td rowspan="2">50.5-52.0</td><td>P_D</td><td>DMOL</td></tr>
<tr><td>F_E</td><td>P_E</td><td>0</td></tr>
</table>
</td></tr>
<tr><td>PPM1.7.1.5 Signals List #5</td><td>Signals List #5
The Controllable PPM shall make the following signals available as specified in the relevant specifications and site-specific signal lists:</td><td>Signals List #5
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</table>

	a) Frequency Response Curve (i.e. *Power-Frequency Response Curve 1 or Curve 2 or Mode (1 to 5)*);	a) Frequency Response Curve (i.e. *Power-Frequency Response Curve 1 or Curve 2 or Mode (1 to 5)*);