

# Implementation of the National Electricity Amendment (Mandatory Primary Frequency Response) Rule 2020

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**Status as at 23 Oct 2020**

A report for the National Electricity Market

# Important notice

## PURPOSE

AEMO publishes this report to inform industry about AEMO's implementation of the National Electricity Amendment (Mandatory Primary Frequency Response) Rule 2020 (Mandatory PFR Rule).

This publication has been prepared by AEMO using information available at 23 October 2020. This information will be updated and superseded by future implementation reports until full implementation.

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| Version                   | Release date | Changes |
|---------------------------|--------------|---------|
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# 1. Summary

This report provides information on the implementation of the National Electricity Amendment (Mandatory Primary Frequency Response) Rule 2020<sup>1</sup> (Mandatory PFR Rule). It will be updated periodically as implementation proceeds, at intervals of approximately two to three weeks.

The Mandatory PFR Rule affects *Scheduled Generators* and *Semi-Scheduled Generators* (Affected Generators), who are initially required to undertake a self-assessment of the ability of their *generating systems* (Affected GS) to provide *primary frequency response* (PFR) in accordance with the *primary frequency response parameters* (PFRP) specified in the interim *Primary Frequency Response Requirements* (IPFRR).

Implementation of the Mandatory PFR Rule will be carried out in three tranches, as specified in the IPFRR. The results of the self-assessments (Results) for Tranche 1<sup>2</sup> Affected Generators were due on 28 August 2020, with implementation of setting changes for generation in Tranche 1 commencing from around 30 September 2020.

AEMO has also started receiving Results from Affected Generators with Affected GSs in Tranches 2 and 3. Some have provided draft Results and discussed issues associated with meeting the PFRP. Results for Affected GSs in Tranche 2 are due by 19 November 2020, and for Tranche 3 by 17 February 2021.

Table 1 shows the number of Results, applications for variation and exemption received as at the date of this report.

**Table 1 Incoming Results and Applications**

| Number of Affected GS | Results | Applications for Variation | Applications for Exemption |
|-----------------------|---------|----------------------------|----------------------------|
| Tranche 1             | 76      | 18                         | 8                          |
| Tranche 2             | 7       | 2                          | 3                          |
| Tranche 3             | 6       | 0                          | 1                          |

## 2. Self-Assessments

AEMO has received Results in respect of 89 Affected GSs, including for some Affected GSs in Tranches 2 and 3.

AEMO has completed its review for 81 of those, covering around 34,000 MW of installed capacity. A register of Affected GSs with agreed PFR Settings is listed in Table 4.

<sup>1</sup> Available at <https://www.aemc.gov.au/rule-changes/mandatory-primary-frequency-response>.

<sup>2</sup> Tranche 1 Affected GS are those with a *Registered Capacity* above 200 MW. Tranche 2 Affected GS are between 80 and 200 MW. Tranche 3 are below 80 MW. All Registered Capacities are the level of the individual DUID.

# 3. Applications for Variation

Table 2 details the number of applications for variation received in respect of Affected GSs, those granted and those still under consideration as at the date of this report.

The majority of variations granted in Tranche 1 were in relation to response time.

**Table 2 Variations**

| <b>Number of Affected GS</b> | <b>Applications for Variation</b> | <b>Variations Granted</b> | <b>Variations not Granted</b> | <b>Variations being Assessed</b> |
|------------------------------|-----------------------------------|---------------------------|-------------------------------|----------------------------------|
| <b>Tranche 1</b>             | 18                                | 15                        |                               | 3                                |
| <b>Tranche 2</b>             | 2                                 | 2                         |                               |                                  |
| <b>Tranche 3</b>             | 0                                 |                           |                               |                                  |

# 4. Applications for Exemption

Table 3 details the number of applications for exemption received in respect of Affected GSs, those granted and those still under consideration as at the date of this report.

**Table 3 Exemptions**

| <b>Number of Affected GS</b> | <b>Applications for Exemption</b> | <b>Exemptions Granted</b> | <b>Exemptions not Granted</b> | <b>Exemptions being Assessed</b> |
|------------------------------|-----------------------------------|---------------------------|-------------------------------|----------------------------------|
| <b>Tranche 1</b>             | 8                                 |                           | 8                             |                                  |
| <b>Tranche 2</b>             | 3                                 |                           |                               | 3                                |
| <b>Tranche 3</b>             | 1                                 |                           |                               | 1                                |

# 5. Implementation of PFR Settings

## 5.1 Tranche 1 Implementation

Implementation of PFR Settings for generation in Tranche 1 has commenced. The latest information on expected and actual timing of setting changes is shown in Table 4.

AEMO is continuing to work to achieve implementation of PFR Settings across the largest possible proportion of Tranche 1 Affected GSs prior to Summer 2020-21.

Some Tranche 1 Affected Generators have indicated a preference to make staged changes to frequency response deadbands, in which case, more than one implementation date is listed in Table 4. Other Affected Generators have elected to alter settings in one step, and in these cases, a single implementation date is listed.

In some cases, expected implementation dates have changed from those reported previously. This has occurred for a number of reasons, including:

- Affected GS forced outages.
- Affected Generator resourcing constraints.
- Delays in provision of key information or advice from OEMs.
- Problems encountered when altering settings.

In all cases, the earliest reasonably achievable date, subject to these constraints, has been determined, or re-determined (as applicable) after consultation with the relevant Affected Generator.

## 5.2 Implementation for Tranche 2 and 3

As outlined in the IPFRR, Tranche 2 and Tranche 3 Affected Generators are required to complete their self-assessments by 19 November 2020, and 17 February 2021, respectively.

Power system reliability and security concerns suggest that requiring control system setting changes across a large number of Affected GSs in the middle of Summer 2020/21 might not be prudent as this is, typically, the most challenging period of the year for power system operations.

Noting these competing demands, it is currently proposed that implementation of setting changes would be targeted for completion by the following dates:

- Tranche 2 (DUIDs 80 MW – 200 MW) – By 30 March 2021
- Tranche 3 (DUIDs below 80 MW) – By 30 June 2021

## 5.3 Flexibility in Implementation Dates

Some flexibility in implementation dates exists, particularly if an Affected Generator wishes to complete implementation of setting changes earlier than previously agreed. Affected Generators currently undertaking commissioning activities may wish to undertake the necessary work while specialist staff remain available and onsite.

Provided they consult with AEMO beforehand, Affected Generators may commence making setting changes earlier, or in an incremental manner, to achieve their PFR Settings by the specified implementation date.

Power system conditions, such as major network outages, could also require alterations to implementation dates, though this has not been necessary to date.

## 5.4 Generation providing PFR prior to Mandatory PFR Rule

Previous surveys of generator active power controls, and more recent engagement with Affected Generators indicate that no large Affected GSs were providing PFR that fully met the PFRP prior to the Mandatory PFR Rule.

AEMO is aware of a small number of, typically, smaller or low capacity factor Affected GSs that are operating in a way that could meet the PFRP (at least partially). These are identified in Table 4 following confirmation from the Affected Generator.

# 6. Register of Affected GS

Table 4 details, for each Affected GS, the planned or actual dates for completion of implementation of the PFR Settings notified by AEMO in accordance with the IPFRR, and whether AEMO has granted an exemption or variation from the PFRP. Where a variation has been granted, the table also indicates which PFRP has been varied.

A single implementation date under the 'Stage 1' column indicates that full implementation of the PFR Settings is to be, or has been, achieved by that date. The 'Stage 2' column will only be populated where the deadband is to be, or has been, tightened in two stages.

Tranche 2 (in blue font) and Tranche 3 (in green font) generation is being added to this table as AEMO completes their assessments.

At the time of writing, Affected GS's with an installed capacity of approximately 13,900 MW have either partially or fully implemented PFR Setting changes.

**Table 4 Register of Affected GS**

| Affected GS Name | DUID     | Reg Cap (MW) | PFR Settings changes to be (or have been) implemented for ongoing operation by |                                  | Exemption | Variation | PFRP Varied                |
|------------------|----------|--------------|--|----------------------------------|-----------|-----------|----------------------------|
|                  |          |              | Stage 1  | Stage 2 <sup>3</sup>             |           |           |                            |
| Ararat WF        | ARWF1    | 241          | End of week commencing 2 Nov 20  | End of week commencing 16 Nov 20 |           |           |                            |
| Barker Inlet PS  | BARKIPS1 | 211          | Pre-existing   |                                  |           | Yes       | Response time <sup>4</sup> |
| Bayswater PS     | BW01     | 660          | 29 Sep 20  | 14 Oct 20                        |           |           |                            |
| Bayswater PS     | BW02     | 660          | 16 Oct 20  |                                  |           |           |                            |

<sup>3</sup> This column will be populated only when deadband adjustments will be made in two stages.

<sup>4</sup> AEMO has granted a variation in respect of response time, where 12 sec is required to achieve a 5% change in output. This information is included with the consent of the Affected Generator.

| Affected GS Name         | DUID             | Reg Cap (MW) | PFR Settings changes to be (or have been) implemented for ongoing operation by |                      | Exemption | Variation | PFRP Varied   |
|--------------------------|------------------|--------------|--|----------------------|-----------|-----------|---------------|
|                          |                  |              | Stage 1  | Stage 2 <sup>3</sup> |           |           |               |
| Bayswater PS             | BW03             | 660          | After RTS in late Oct 2020   |                      |           |           |               |
| Bayswater PS             | BW04             | 660          | 29 Sep 20  | 14 Oct 20            |           |           |               |
| Bogong / Mackay PS       | MCKAY1           | 300          | 22 Oct 20  |                      |           |           |               |
| Callide B PS             | CALL_B_1         | 350          | 3 Nov 20   | 11 Nov 20            |           |           |               |
| Callide B PS             | CALL_B_2         | 350          | 30 Sep 20  | 28 Oct 20            |           |           |               |
| Callide C PS             | CPP_3            | 420          | 6 Nov 20   | 16 Nov 20            |           | Yes       | Response time |
| Callide C PS             | CPP_4            | 420          | TBC <sup>5</sup>   |                      |           | Yes       | Response time |
| Coopers Gap WF           | COOPGWF1         | 452          | 30 Nov 20  | 14 Dec 20            |           |           |               |
| Darling Downs PS         | DDPS1            | 644          | 15 Jun 20  |                      |           |           |               |
| Darlington Point SF      | DARLSF1          | 324          | Upon reaching 200 MW HP  |                      |           |           |               |
| Eraring PS               | ER01             | 720          | End of week commencing 26 Oct 20   |                      |           | Yes       | Response time |
| Eraring PS               | ER02             | 720          | 16 Oct 20  |                      |           | Yes       | Response time |
| Eraring PS               | ER03             | 720          | 13 Oct 20  |                      |           | Yes       | Response time |
| Eraring PS               | ER04             | 720          | 20 Oct 20  |                      |           | Yes       | Response time |
| Gangarri SF <sup>6</sup> | TBC <sup>7</sup> | 120          | Upon completion of commissioning   |                      |           |           |               |
| Gladstone PS             | GSTONE1          | 280          |  |                      |           |           |               |
| Gladstone PS             | GSTONE2          | 280          |  |                      |           |           |               |
| Gladstone PS             | GSTONE3          | 280          |  |                      |           |           |               |
| Gladstone PS             | GSTONE4          | 280          |  |                      |           |           |               |
| Gladstone PS             | GSTONE5          | 280          |  |                      |           |           |               |
| Gladstone PS             | GSTONE6          | 280          |  |                      |           |           |               |
| Gordon PS                | GORDON           | 432          | Unit 1 – 11 Dec 20   |                      |           |           |               |

<sup>5</sup> Implementation of PFR settings on this unit requires repair of key auxiliary plant. An expected date for this work was not available at the time of writing, however it is expected a date will be confirmed for the next update report.

<sup>6</sup> Affected Generator not registered yet; still undergoing commissioning.

<sup>7</sup> DUID not yet assigned.

| Affected GS Name        | DUID     | Reg Cap (MW) | PFR Settings changes to be (or have been) implemented for ongoing operation by |                                  | Exemption | Variation | PFRP Varied   |
|-------------------------|----------|--------------|--|----------------------------------|-----------|-----------|---------------|
|                         |          |              | Stage 1  | Stage 2 <sup>3</sup>             |           |           |               |
|                         |          |              | Unit 2 – 28 Sep 20   |                                  |           |           |               |
|                         |          |              | Unit 3 – 29 Sep 20   |                                  |           |           |               |
| Hallett PS              | AGLHAL   | 217          | 31 Oct 20 <sup>8</sup>   |                                  |           |           |               |
| Jemalong SF             | JEMALNG1 | 50           | Upon completion of commissioning.  |                                  |           |           |               |
| Kiamal SF               | KIAMSF1  | 239          | Upon reaching 200 MW HP  |                                  |           |           |               |
| Kogan Creek PS          | KPP_1    | 744          | 23 Nov 20  | 26 Nov 20                        |           |           |               |
| Liddell PS              | LD01     | 500          | 25 Nov 20  |                                  |           |           |               |
| Liddell PS              | LD02     | 500          | 25 Nov 20  |                                  |           |           |               |
| Liddell PS              | LD03     | 500          | 25 Nov 20  |                                  |           |           |               |
| Liddell PS              | LD04     | 500          | 25 Nov 20  |                                  |           |           |               |
| Limondale 1 SF          | LIMOSF11 | 275          | Upon reaching 200 MW HP  |                                  |           |           |               |
| Lincoln Gap WF          | LGAPWF1  | 212          | End of week commencing 2 Nov 20  |                                  |           |           |               |
| Loy Yang A PS           | LYA1     | 560          | 14 Oct 20  |                                  |           |           |               |
| Loy Yang A PS           | LYA2     | 530          | 14 Oct 20  | End of week commencing 26 Oct 20 |           |           |               |
| Loy Yang A PS           | LYA3     | 560          | After RTS in early Nov 2020  |                                  |           |           |               |
| Loy Yang A PS           | LYA4     | 560          | 15 Oct 20  |                                  |           |           |               |
| Loy Yang B PS           | LOYYB1   | 500          | 12 Dec 20  | 17 Dec 20                        |           |           |               |
| Loy Yang B PS           | LOYYB2   | 500          | 30 Sep 20  | 28 Oct 20                        |           |           |               |
| Macarthur WF            | MACARTH1 | 420          | 16 Nov 20  |                                  |           |           |               |
| Millmerran PS           | MPP_1    | 426          | 1 Oct 20   | 28 Oct 20                        |           | Yes       | Response time |
| Millmerran PS           | MPP_2    | 426          | After RTS in early Nov 2020  |                                  |           | Yes       | Response time |
| Morgan Whyalla Pump PV1 | MWPS1PV1 | 6            | Upon completion of commissioning in Feb 2021                                   |                                  |           |           |               |

<sup>8</sup> Applicable to one generating unit, remainder previously complied with the PFRP.

| Affected GS Name        | DUID     | Reg Cap (MW) | PFR Settings changes to be (or have been) implemented for ongoing operation by |   | Exemption | Variation | PFRP Varied                           |
|-------------------------|----------|--------------|--|---|-----------|-----------|---------------------------------------|
|                         |          |              | Stage 1  | Stage 2 <sup>3</sup>  |           |           |                                       |
| Morgan Whyalla Pump PV2 | MWPS2PV1 | 6            |  | Upon completion of commissioning in Feb 2021                          |           |           |                                       |
| Morgan Whyalla Pump PV3 | MWPS3PV1 | 8            |  | Upon completion of commissioning in Oct 2020                          |           |           |                                       |
| Morgan Whyalla Pump PV4 | MWPS4PV1 | 6            |  | Upon completion of commissioning in Feb 2021                          |           |           |                                       |
| Mortlake PS             | MORTLK11 | 283          |  | 30 Sep 20   |           |           |                                       |
| Mortlake PS             | MORTLK12 | 283          |  | After RTS in early Nov 20.  |           |           |                                       |
| Mt Piper PS             | MP1      | 700          |  | After RTS in late Dec 20.   |           |           |                                       |
| Mt Piper PS             | MP2      | 700          |  | 29 Sep 20   |           |           | 28 Oct 20                             |
| Murra Warra WF          | MUWAWF1  | 231          |  | End of week commencing 2 Nov 20                                       |           |           |                                       |
| Murray PS               | MURRAY   | 1500         |  | 31 March 21 <sup>9</sup>  |           |           |                                       |
| Newport PS              | NPS      | 500          |  | 28 Sep 20   |           |           | 19 Oct 20                             |
| Pelican Point PS        | PPCCGT   | 478          |  | 30 Sep 20   |           |           |                                       |
| Poatina PS              | POAT220  | 200          |  | Pre-existing  |           | Yes       | Deadband, Response Time <sup>10</sup> |
| Poatina PS              | POAT110  | 100          |  | Pre-existing  |           | Yes       | Deadband, Response Time <sup>11</sup> |
| Sapphire WF             | SAPHWF1  | 270          |  | 30 Oct 20   |           |           |                                       |
| Shoalhaven PS           | SHGEN    | 240          |  | Bendeela Unit 1 – 31 October 2022<br>Bendeela Unit 2 - 31 August 2021 |           |           |                                       |

<sup>9</sup> One generating unit (out of 14) will have PFR Settings implemented after RTS in Oct 2021.

<sup>10</sup> The variation to the deadband at  $\pm 150$  mHz is for 6 months only. The variations were granted due to the inherent capability and design of the Affected GS. This information is included with the consent of the Affected Generator.

<sup>11</sup> The variation to the deadband at  $\pm 150$  mHz is for 6 months only. The variations were granted due to the inherent capability and design of the Affected GS. This information is included with the consent of the Affected Generator.

| Affected GS Name    | DUID     | Reg Cap (MW) | PFR Settings changes to be (or have been) implemented for ongoing operation by |                      | Exemption | Variation                          | PFRP Varied |
|---------------------|----------|--------------|--|----------------------|-----------|------------------------------------|-------------|
|                     |          |              | Stage 1  | Stage 2 <sup>3</sup> |           |                                    |             |
|                     |          |              | Kangaroo Valley Unit 3 -30   | November 2023        |           |                                    |             |
|                     |          |              | Kangaroo Valley Unit 4 -31   | August 2021          |           |                                    |             |
| Stanwell PS         | STAN-1   | 365          | 27 Oct 20  |                      |           |                                    |             |
| Stanwell PS         | STAN-2   | 365          | 27 Oct 20  |                      |           |                                    |             |
| Stanwell PS         | STAN-3   | 365          | 27 Oct 20  |                      |           |                                    |             |
| Stanwell PS         | STAN-4   | 365          | Upon RTS in late Oct 2020  |                      |           |                                    |             |
| Swanbank E GT       | SWAN_E   | 385          | 16 Nov 20  |                      | Yes       | Response Time                      |             |
| Tallawarra PS       | TALWA1   | 440          | Upon RTS from outage in late Mar 2021  |                      |           |                                    |             |
| Tamar Valley CCGT   | TVCC201  | 208          |  |                      |           |                                    |             |
| Tarong North PS     | TNPS1    | 443          | 27 Oct 20  |                      | Yes       | Droop, Response Time <sup>12</sup> |             |
| Tarong PS           | TARONG#1 | 350          | 27 Oct 20  |                      |           |                                    |             |
| Tarong PS           | TARONG#2 | 350          | Upon RTS in early Nov  |                      |           |                                    |             |
| Tarong PS           | TARONG#3 | 350          | 27 Oct 20  |                      |           |                                    |             |
| Tarong PS           | TARONG#4 | 350          | 27 Oct 20  |                      |           |                                    |             |
| Torrens Island B PS | TORRB1   | 200          |  |                      |           |                                    |             |
| Torrens Island B PS | TORRB2   | 200          |  |                      |           |                                    |             |
| Torrens Island B PS | TORRB3   | 200          |  |                      |           |                                    |             |
| Torrens Island B PS | TORRB4   | 200          |  |                      |           |                                    |             |
| Tumut 3 PS          | TUMUT3   | 1500         | 30 Nov 20  |                      |           |                                    |             |
| Tumut 1 & 2 PS      | UPPTUMUT | 616          | 30 Nov 20  |                      |           |                                    |             |
| Vales Point B PS    | VP5      | 660          | 30 Sep 20  |                      | Yes       | Deadband <sup>13</sup>             |             |

<sup>12</sup> The droop characteristics applied to the unit do not meet the requirement for a droop of 5% or less. This variation is granted for a period of 12 months only. An ongoing variation on response time has been granted. This information is included with the consent of the Affected Generator.

<sup>13</sup> AEMO has granted a variation to the deadband at  $\pm 100$  mHz based on the unique condition of the Affected GS for a period of 12 months. This information is included with the consent of the Affected Generator.

| Affected GS Name | DUID    | Reg Cap (MW) | PFR Settings changes to be (or have been) implemented for ongoing operation by |                      | Exemption | Variation | PFRP Varied            |
|------------------|---------|--------------|--|----------------------|-----------|-----------|------------------------|
|                  |         |              | Stage 1  | Stage 2 <sup>3</sup> |           |           |                        |
| Vales Point B PS | VP6     | 660          | 30 Sep 20  |                      |           | Yes       | Deadband <sup>14</sup> |
| Wivenhoe PS      | W/HOE#1 | 285          | 26 Oct 20  |                      |           | Yes       | Response Time          |
| Wivenhoe PS      | W/HOE#2 | 285          | 27 Oct 20  |                      |           | Yes       | Response Time          |
| Yallourn W PS    | YWPS1   | 360          | 28 Oct 20  |                      |           |           |                        |
| Yallourn W PS    | YWPS2   | 360          | 29 Sep 20  | 28 Oct 20            |           |           |                        |
| Yallourn W PS    | YWPS3   | 380          | 29 Sep 20  | 28 Oct 20            |           |           |                        |
| Yallourn W PS    | YWPS4   | 380          | 29 Sep 20  | 28 Oct 20            |           |           |                        |

## 7. Impact on Frequency Performance

AEMO provides detailed reporting on power system frequency performance in its Frequency and Time Error Monitoring reports<sup>15</sup> published quarterly. The most recent report was published in August 2020, with the next update due in mid November 2020.

This report focuses on a sub-set of the matters raised in the quarterly report and provides some information focusing on relatively recent frequency performance to help capture impacts on power system frequency that are (at least in part) associated with the implementation of the Mandatory PFR Rule.

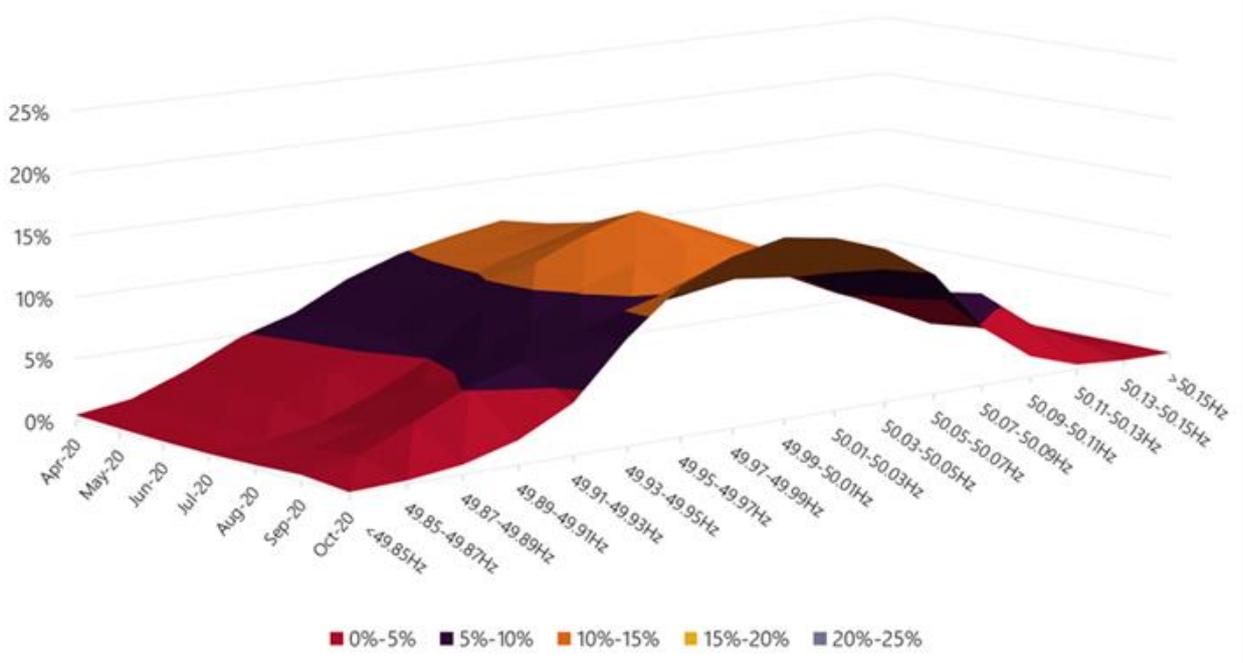
Figure 1 shows the monthly frequency distribution for the last six months (01 Apr 2020 to 21 Oct 2020). Figure 2 shows the day-by-day frequency distribution from around the time Affected Generators began implementation of their PFR Settings at the end of September 2020.

These figures show improvement in the closeness of the distribution of frequency around 50 Hz, particularly during the week prior to publication of this update. This trend is expected to continue as additional Affected GSs implement PFR Settings during the following weeks and months.

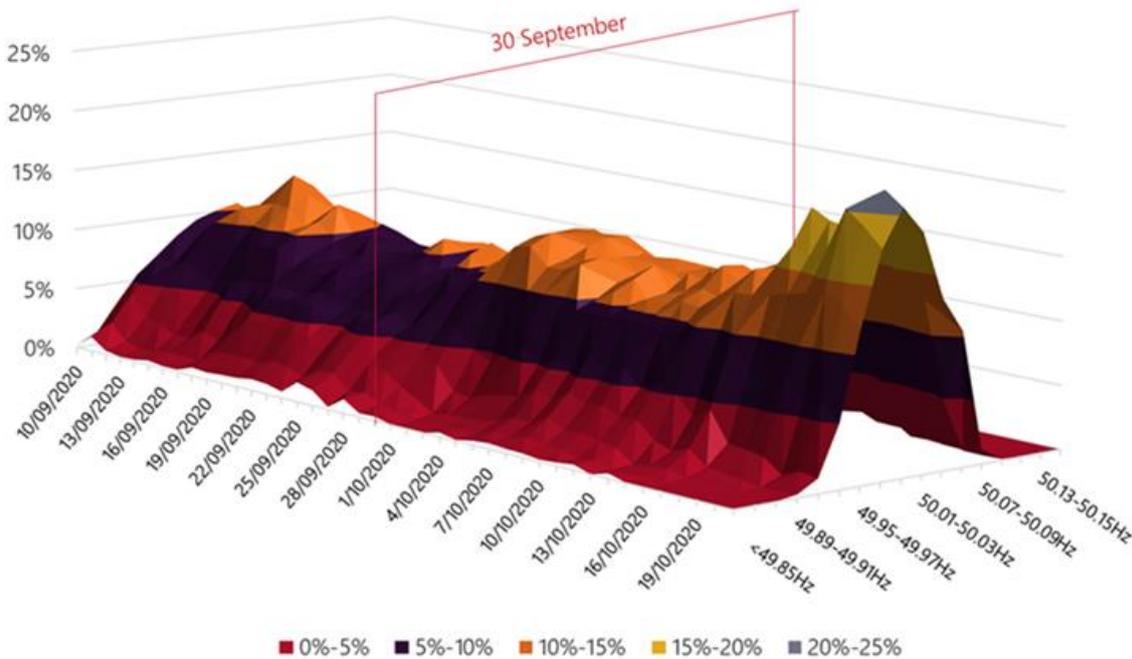
<sup>14</sup> AEMO has granted a variation to the deadband at  $\pm 100$  mHz based on the unique condition of the Affected GS for a period of 12 months. This information is included with the consent of the Affected Generator.

<sup>15</sup> Available at <https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/system-operations/ancillary-services/frequency-and-time-deviation-monitoring>.

**Figure 1 Monthly frequency distribution (six-month rolling, 01 Apr 2020 to 21 Oct 2020)**



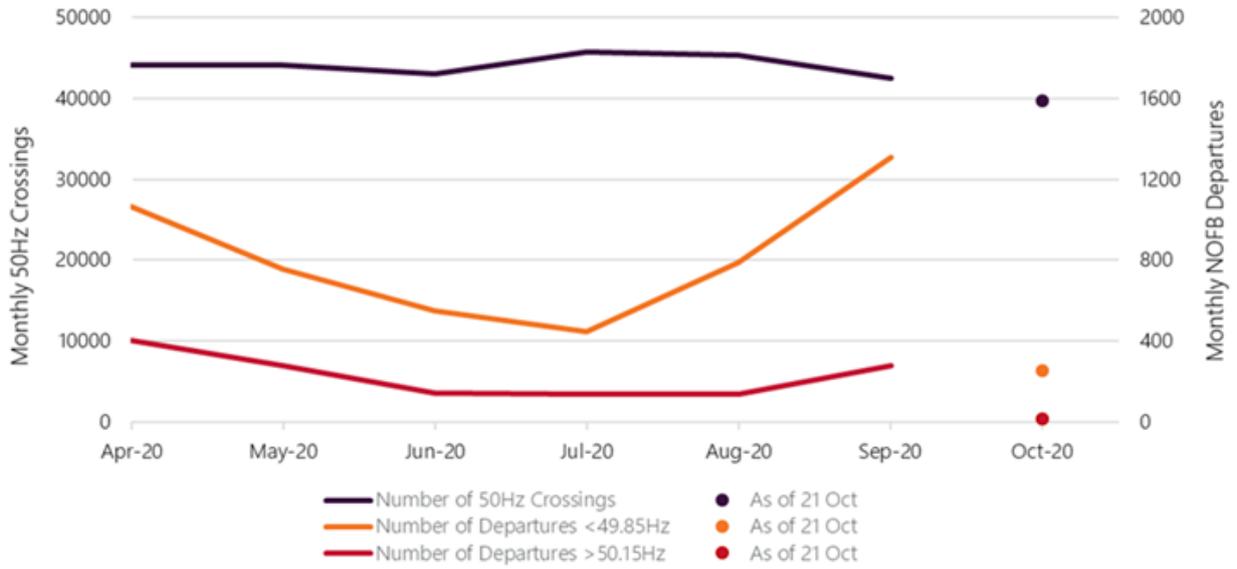
**Figure 2 Daily frequency distribution (data from 10 Sep 2020 to 21 Oct 2020)**



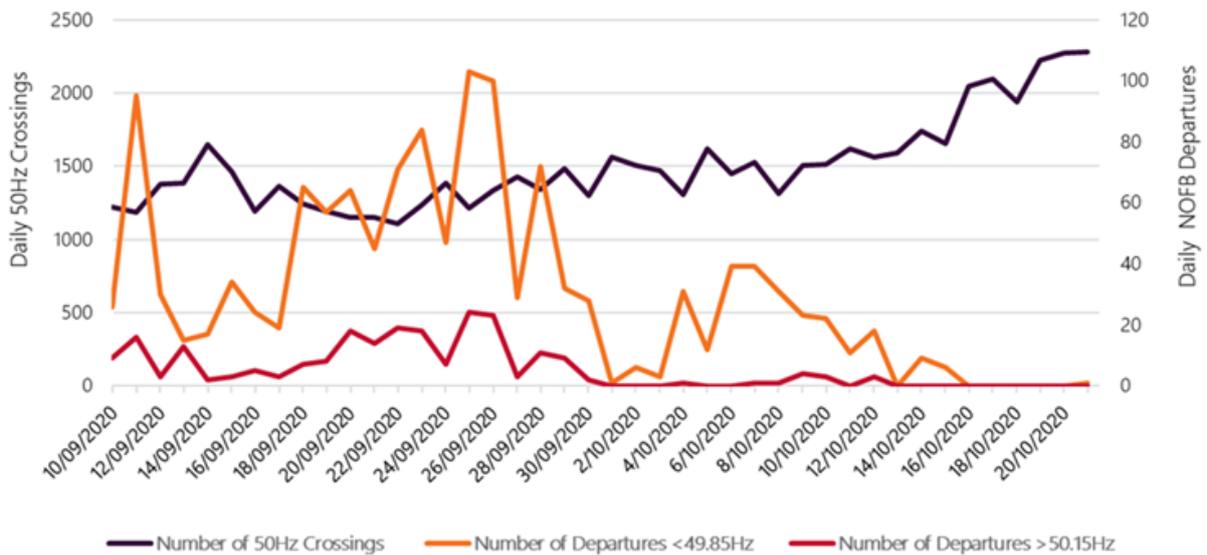
The total number of departures from the normal operating frequency band (NOFB) and the number of times frequency crossed the nominal 50 Hz is shown on a monthly basis in Figure 3 and on a day-by-day basis in Figure 4.

These figures show a significant reduction in the number of excursions outside the NOFB following the commencement of implementation of PFR setting changes from the end of September 2020.

**Figure 3 Monthly frequency crossings – under 49.85 Hz, across 50 Hz, beyond 50.15 Hz**



**Figure 4 Daily frequency crossings – under 49.85 Hz, across 50 Hz, beyond 50.15 Hz**



# Glossary

This document uses many terms that have meanings defined in the National Electricity Rules (NER). The NER meanings are adopted unless otherwise specified.

| <b>Term</b>        | <b>Definition</b>  |
|--------------------|--|
| Affected Generator | As defined in the IPFRR.   |
| Affected GS        | As defined in the IPFRR.   |
| CCGT               | Combined Cycle Gas Turbine.  |
| DUID               | Dispatchable unit identification.  |
| GT                 | Gas Turbine  |
| HP                 | Hold Point. A point during commissioning of new <i>plant</i> determined by reference to <i>generation</i> output.        |
| IPFRR              | Interim Primary Frequency Response Requirements.   |
| Mandatory PFR Rule | National Electricity Amendment (Mandatory Primary Frequency Response) Rule 2020.   |
| NOFB               | <i>normal operating frequency band.</i>  |
| PFR                | <i>primary frequency response.</i>   |
| PFR Settings       | The settings to achieve the provision of PFR in accordance with the IPFRR, as notified to an Affected Generator by AEMO. |
| PFRP               | <i>primary frequency response parameters.</i>  |
| PS                 | Power Station.   |
| PV                 | Photovoltaic   |
| Results            | As defined in the IPFRR.   |
| RTS                | Return to service following an <i>outage</i> .   |
| SF                 | Solar Farm.  |
| Tranche 1          | Affected GS with a <i>nameplate rating</i> of >200 MW.   |
| Tranche 2          | Affected GS with a <i>nameplate rating</i> between 80 MW and 200 MW.   |
| Tranche 3          | Affected GS with a <i>nameplate rating</i> of <80 MW.  |
| WF                 | Wind Farm.   |