

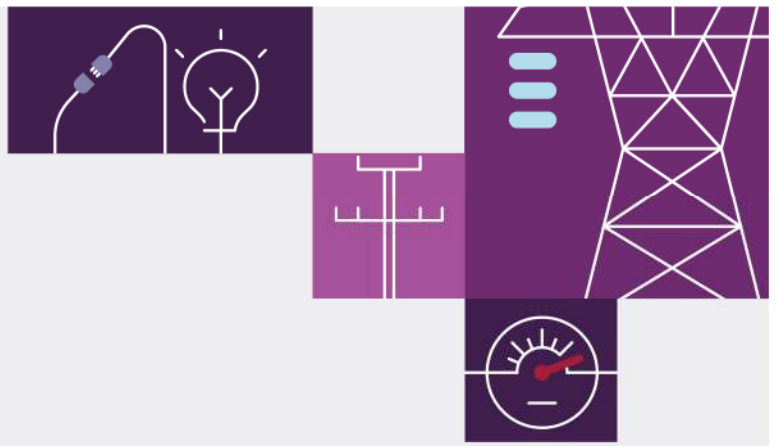
# Wholesale Demand Response

June 2025

## Annual Report

A report on the operation of the arrangements for the provision of wholesale demand response





# Important notice

## Purpose

AEMO publishes the Wholesale Demand Response Annual Report under clause 3.10.6 of the National Electricity Rules.

This publication has been prepared by AEMO using information available at 30 May 2025. Information made available after this date may have been included in this publication where practical.

## Disclaimer

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## Version control

| Version | Release date | Changes |
|---------|--------------|---------|
| 1       | 30/06/2025   |         |

# Executive summary

This report provides information on wholesale demand response (WDR) operations, including on baseline methodologies, WDR performance and WDR trends, as required under the National Electricity Rules (NER) clause 3.10.6 for the period 1<sup>st</sup> of July 2024 to 30<sup>th</sup> of May 2025.

The report finds that overall, the available baseline methodologies and the eligibility assessment, compliance testing and non-conformance processes are all functioning as expected. AEMO considers that the baseline accuracy and bias thresholds remain appropriate.

In terms of WDR operations, there has been a slow build of WDR capacity registered since the mechanism commenced in October 2021. Most WDR events to date have been in the NSW and VIC regions, concentrated in the May to October periods, with very little WDR over summer seasons. The key operational statistics for WDR are shown in Table 1.

**Table 1 WDR operation – key statistics as of 30 May 2025**

| Key statistic   | Value  |
|---|--|
| Baseline methodologies available <sup>1</sup>                             | 4  |
| Baseline methodologies used by participants                               | 3  |
| Total number of DRSPs registered  | 2  |
| Total WDRUs registered  | 20   |
| Total NMIs registered   | 158  |
| Regions in which NMIs are registered                                      | NSW, VIC, SA, QLD                              |
| Total capacity registered (MW)  | 74.4 MW  |
| Number of NMIs not passing compliance testing – July 2024 to June 2025    | 9 NMIs (summer 2024/25), 3 NMIs (winter 2025)  |
| WDR event days – July 2024 to 30 May 2025                                 | 23 days  |
| Region of WDR events  | NSW, QLD, VIC                                  |
| Total WDR dispatched - July 2024 to 30 May 2025 (MWh)                     | 240 MWh  |
| Average Volume Weighted Price for WDR - July 2024 to 30 May 2025 (\$/MWh) | 3,746 \$/MWh to 5,890 \$/MWh across the states |
| Non-conformance frequency - July 2024 to 30 May 2025                      | None   |
| Non-conformance extent - July 2024 to 30 May 2025                         | 32 MWh   |

<sup>1</sup> Additional baseline methodologies are being implemented, but have not been finalised, and are not available for participants at the date of publication (see Section 2.3 for details).



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# 1 Background

The wholesale demand response (WDR) mechanism commenced in the National Electricity Market (NEM) on 24 October 2021, implementing the AEMC's **WDR Mechanism rule**<sup>2</sup> of June 2020. The WDR mechanism allows demand side (or consumer) participation in the wholesale electricity market. 'Demand Response Service Providers' (DRSP) classify and aggregate the demand response capability of large market loads for dispatch through the NEM's standard bidding and scheduling processes. DRSPs receive payment for the dispatched response, against a baseline estimate, at the electricity spot price.

## 1.1 Rules requirements

Under NER clause 3.10.6, within six months after the end of each calendar year, AEMO is required to publish an annual report on the operation of the arrangements for the provision of WDR, including the following information on DRSP-led wholesale demand response (without disclosing any confidential information):

- the use and accuracy of WDR baseline methodologies
- the number of registered DRSPs
- the number and capacity of loads classified as wholesale demand response units
- the amount of demand response dispatched in the wholesale market under the wholesale demand response mechanism, as well as the frequency of dispatch
- analysis of the spot price levels at which wholesale demand response was dispatched
- analysis of the impact of wholesale demand response on the procurement and use of market ancillary services
- relevant trends, including year-on-year changes over time.

## 1.2 Procedural requirements

Under clause 2.8 of AEMO's WDRM Baseline Eligibility, Metrics and Compliance Policy<sup>3</sup>, AEMO has committed to undertake an annual review of the suitability of the eligibility and compliance methodology as well as the metrics thresholds (See Section 2.7 of this report).

<sup>2</sup> <https://www.aemc.gov.au/rule-changes/wholesale-demand-response-mechanism>

<sup>3</sup> [https://aemo.com.au/-/media/files/stakeholder\\_consultation/consultations/nem-consultations/2020/wdrm-becm-policy/first-round/baselines-eligibility-compliance-and-metrics-policy.pdf?la=en](https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2020/wdrm-becm-policy/first-round/baselines-eligibility-compliance-and-metrics-policy.pdf?la=en)

## 2 Baseline methodologies reporting

Under NER 3.10.6(b), AEMO's reporting on the use and accuracy of baseline methodologies must include:

- Baseline methodologies available
- Baseline methodology use
- Any new baseline methodologies proposed or in development
- Baseline methodology assessment against metrics
- Baseline non-compliance
- Potential improvements to WDR provision, including implementation timing and process

### 2.1 Baseline methodologies available

The four baseline methodologies (and their associated key settings) available for use currently under the wholesale demand response guidelines are shown in Table 2. They are outlined in the Baseline Methodologies Register<sup>4</sup>.

**Table 2 Baseline methodologies – key settings summary table**

|                 | All Days (BM1)                   | Business Days (BM2)                       | Non-Business Days (BM3)                      | Business + Non-Business Days Composite (BM4) <sup>5</sup>                                 |
|-----------------|----------------------------------|---|--|---|
| BM ID           | BM1                              | BM2                                       | BM3  | BM4   |
| Framework       | CAISO 10 of 10                   | CAISO 10 of 10                            | CAISO 4 of 4                                 | CAISO 10 of 10<br>CAISO 4 of 4  |
| Day type        | All days.                        | Business days only.                       | Non-business days only.                      | Business days and non-business days.  |
| Baseline window | 50 days                          | 50 days                                   | 50 days                                      | 50 days   |
| Selected days   | Most recent 10 days (minimum 5). | Most recent 10 business days (minimum 5). | Most recent 4 non-business days (minimum 4). | Most recent 10 business days (minimum 5).<br>Most recent 4 non-business days (minimum 4). |

<sup>4</sup> <https://aemo.com.au/-/media/files/initiatives/wdr/baseline-methodology-register.pdf?la=en>

<sup>5</sup> The Business + Non-Business Days Composite baseline methodology (BM4) is referred to as 'Composite' in the report tables for brevity.

|  | All Days (BM1)                                   | Business Days (BM2)                              | Non-Business Days (BM3)                          | Business + Non-Business Days Composite (BM4) <sup>5</sup> |
|--|--|--|--|---|
| <b>Unadjusted baseline energy for TI</b>       | Average metered energy for TI for selected days. | Average metered energy for TI for selected days. | Average metered energy for TI for selected days. | Average metered energy for TI for selected days.          |
| <b>Baseline adjustment</b>                     | Multiplicative adjustment with $\pm 20\%$ cap.   | Multiplicative adjustment with $\pm 20\%$ cap.   | Multiplicative adjustment with $\pm 20\%$ cap.   | Multiplicative adjustment with $\pm 20\%$ cap.            |
| <b>Baseline adjustment window (settlement)</b> | 3 hrs ending 1 hr prior to the first TI of WDR.  | 3 hrs ending 1 hr prior to the first TI of WDR.  | 3 hrs ending 1 hr prior to the first TI of WDR.  | 3 hrs ending 1 hr prior to the first TI of WDR.           |
| <b>Baseline adjustment window (PoL)</b>        | 3 hrs ending 1 hr prior to TI.                   | 3 hrs ending 1 hr prior to TI.                   | 3 hrs ending 1 hr prior to TI.                   | 3 hrs ending 1 hr prior to TI.                            |
| <b>Required number of eligibility days</b>     | 50   | 50   | 20   | 50  |
| <b>Eligibility TIs window</b>                  | 3pm to 8pm (market time)                         | 3pm to 8pm (market time)                         | 3pm to 8pm (market time)                         | 3pm to 8pm (market time)                                  |
| <b>Required number of compliance days</b>      | 50   | 50   | 20   | 50  |
| <b>Compliance TIs window</b>                   | 3pm to 8pm (market time)                         | 3pm to 8pm (market time)                         | 3pm to 8pm (market time)                         | 3pm to 8pm (market time)                                  |

## 2.2 Baseline methodology use

The extent to which each of the baseline methodologies are being used is shown in Table 3. Most of the WDR units (WDRU or National Metering Identifier (NMI)) classified by DRSPs are using baseline methodology 4 (Business + Non-Business Days Composite). Table 4 shows that correspondingly, most of the WDR capacity is also registered under BM4. There were 139 NMIs classified for WDR from 1<sup>st</sup> of July 2024 to 30<sup>th</sup> of May 2025, the majority of which have been under BM4. There were also seven NMIs that changed baseline methodology, with all seven changed from BM4 to BM1.

There were nine NMIs declassified, of which two were BM1 and seven were BM4.

**Table 3 Number of NMIs per baseline methodology**

|                  | All Days (BM1) | Business Days (BM2) | Non-Business Days (BM3) | Composite (BM4) | Total number of NMIs |
|------------------|----------------|---------------------|-------------------------|-----------------|----------------------|
| <b>June 2022</b> | -              | 2                   | -                       | 23              | 25                   |



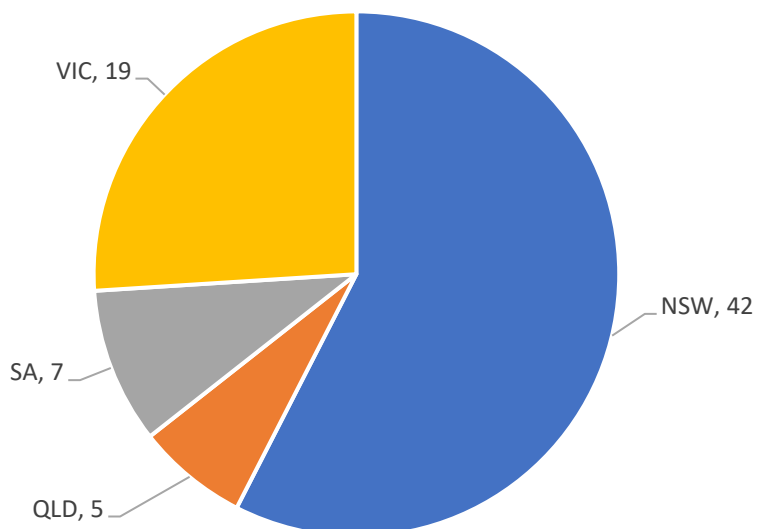
|           | All Days (BM1) | Business Days (BM2) | Non-Business Days (BM3) | Composite (BM4) | Total number of NMIs |
|-----------|----------------|---------------------|-------------------------|-----------------|----------------------|
| June 2023 | 14             | 2                   | -                       | 18              | 34                   |
| June 2024 | 5              | -                   | -                       | 21              | 26                   |
| May 2025  | 67             | 5                   | 0                       | 86              | 158                  |

**Table 4 Total capacity (MW) per baseline methodology**

|           | All Days (BM1) | Business Days (BM2) | Non-Business Days (BM3) | Composite (BM4) | Total Capacity |
|-----------|----------------|---------------------|-------------------------|-----------------|----------------|
| June 2022 | -              | 1.0                 | -                       | 60.6            | 61.6           |
| June 2023 | 9.9            | 1.0                 | -                       | 54.4            | 65.3           |
| June 2024 | 6.0            | -                   | -                       | 57.0            | 63.0           |
| May 2025  | 26.3           | 0.2                 | 0.0                     | 47.8            | 74.4           |

The breakdown of capacity by region is shown in **Error! Reference source not found..** It is split largely between the NSW and VIC regions, with a small amount of capacity in the SA and QLD regions. There is currently no WDR capacity in the TAS region.

**Figure 1 Capacity by region (MW) – 30<sup>th</sup> of May 2025**





## 2.3 Proposals for new baseline methodologies

AEMO received a formal submission for three new baseline methodologies in March 2024. The proposed baseline methodologies were:

1. Proposed BM 1 - 10 of 10 (all days)
  - Baseline lookback window of 20 days for baseline eligibility and compliance
  - A new setting allowing a DRSP to specify the “end of period” date for compliance assessment
  - Uncapped negative day-of adjustments
2. Proposed BM 2 – High 3 of 10 (all days)
  - High 3 of 10 baseline for all days
  - Baseline lookback window of 20 days for baseline eligibility and compliance
  - A new setting allowing a DRSP to specify the “end of period” date for compliance assessment
  - Uncapped negative day-of adjustments
3. Proposed BM 3 – High 3 of 10 (business days)
  - High 3 of 10 baseline for business days only
  - Baseline lookback window of 20 days for baseline eligibility and compliance
  - A new setting allowing a DRSP to specify the “end of period” date for compliance assessment
  - Uncapped negative day-of adjustments

AEMO assessed the proposed baseline methodologies according to the process outlined in the WDR Guidelines<sup>6</sup>. The key outcomes of the resulting consultation<sup>7</sup> (final report published in December 2024) was as follows:

1. Introduction of new baseline methodology options:
  - New CAISO 10 of 10 baseline methodology options (All Days and Business Days) with a shorter 20-day lookback period for eligibility and compliance, to better accommodate seasonally varying loads (currently being progressed for implementation).
  - New CAISO 10 of 10 baseline methodology options (All Days and Business Days) with adjustments to better accommodate solar PV sites (currently being progressed for implementation).
  - New High 5 of 10 baseline methodology options to better accommodate weather-sensitive loads. Given the higher complexity of this baseline methodology, this will be part of a later second phase of implementation.
2. Introduction of an alternative baseline methodology accuracy metric on a trial basis:

<sup>6</sup> Please see at: <https://aemo.com.au/-/media/files/initiatives/wdr/wdr-guidelines.pdf?la=en>

<sup>7</sup> Please see consultation documents at: <https://aemo.com.au/consultations/current-and-closed-consultations/wdr-baseline-methodology-consultation-enelx-proposals>

- AEMO is trialling a higher accuracy threshold of 30% for eligibility and compliance as an additional measure to address stakeholder concerns around the restrictiveness of the WDR Mechanism's eligibility requirements. This is currently available to participants.
- AEMO will review the outcomes of the trial against defined assessment criteria and determine whether to retain the higher threshold, likely in alignment in the 2026 and 2027 WDR Annual Reports.

In addition, AEMO will review two existing WDR mechanism settings, including the Distribution Network Service Provider (DNSP) endorsement process and the baseline methodology proposal and assessment process. This review is expected to commence in the coming months.

No further formal proposals for new baseline methodologies were received between 1<sup>st</sup> of July 2024 and 26<sup>th</sup> of June 2025.

## 2.4 Baseline methodology assessment

To participate in WDR, the DRSP must demonstrate that the baseline methodology, when applied to the load and using the proposed baseline settings and historical metering data for the load, produces a baseline that satisfies the baseline methodology metrics. The two metrics used to assess a baseline's eligibility for WDR (baseline eligibility assessment) and continued compliance (baseline compliance testing) are accuracy and bias.

- Accuracy is the measure of deviation between the actual load and its baseline, the threshold for accuracy to participate in WDR was set at 20%, but since the 30<sup>th</sup> of March 2025 is being trialled at 30%.
- Bias is the systematic tendency of a baseline method to over- or under-predict actual loads, the threshold for bias to participate in WDR is  $\pm 4\%$ .

Table 5 to Table 6 outline the minimum, maximum and average accuracy and bias scores for the baseline methodologies currently in use (BM1, BM2 and BM4), both under baseline eligibility assessment and baseline compliance testing. Baseline compliance testing was conducted as outlined in the WDRM Baseline Eligibility, Metrics and Compliance Policy on 29<sup>th</sup> and 30<sup>th</sup> of November 2024, and then again on 29<sup>th</sup> and 30<sup>th</sup> of May 2025. The compliance testing results shown below are for May 2025, as the most recent/relevant.

Any NMs which failed compliance testing have been excluded from the compliance testing statistics shown in this section. More details about the NMs that failed compliance testing can be found in Section 2.5.

The eligibility assessment and compliance testing results for BM1 are shown in Table 5. Of the NMs that underwent eligibility assessment between 1<sup>st</sup> of July 2024 and 30<sup>th</sup> of May 2025 over 40% of these were for BM1. The average accuracy and bias scores were within the thresholds.

For winter compliance testing (conducted in May 2025), the average accuracy score was well below the new 30% accuracy threshold, at 12.8%. There was a wide range in accuracy scores, from 2.8%, to above the previous 20% threshold at 24.1%. This suggests that there are different types of loads participating in WDR with different load profiles, which in turn have a variety of accuracy scores.

The bias scores for compliance testing ranged between 0% to 4% with an average of 0.9%, significantly below the 4% threshold.

**Table 5 All Days (BM1) – Eligibility assessment and compliance testing results**

|         | Eligibility Assessment |                   | Compliance Testing <sup>8</sup> |      |
|---------|------------------------|-------------------|---------------------------------|------|
|         | Accuracy               | Bias <sup>9</sup> | Accuracy                        | Bias |
| Minimum | 2.6                    | 0.0               | 2.8                             | 0.0  |
| Maximum | 20.0                   | 2.3               | 24.1                            | 4.0  |
| Average | 12.9                   | 0.6               | 12.8                            | 0.9  |

The eligibility assessment and compliance testing results for BM2 are shown in Table6. Of the WDRU that underwent eligibility assessment between 1<sup>st</sup> July 2024 and 30<sup>th</sup> May 2025 approximately 4% were for BM2. Although the bias scores were well below the 4% threshold, all of the accuracy scores were very close to the original threshold of 20%.

For winter compliance testing, the average accuracy score was well below the new 30% accuracy threshold at 16.9%. There was a wide range in accuracy scores, from 12.9% to 22.6%. All the bias scores were well below the 4% threshold.

**Table 6 All Days (BM2) – Eligibility assessment and compliance testing results**

|         | Eligibility Assessment |                      | Compliance Testing <sup>10</sup> |        |
|---------|------------------------|----------------------|----------------------------------|--------|
|         | Accuracy %             | Bias % <sup>11</sup> | Accuracy %                       | Bias % |
| Minimum | 19.0                   | 0.5                  | 12.9                             | 0.3    |
| Maximum | 20.0                   | 2.3                  | 22.6                             | 2.8    |
| Average | 19.4                   | 1.2                  | 16.9                             | 1.1    |

The eligibility assessment and compliance testing results for BM4 are shown in Table7. The average accuracy score was well below the new 30% accuracy threshold at under 13%, for both eligibility assessment and compliance testing. There was a wide range of accuracy scores across eligibility/compliance testing, ranging from as low as 3.6% to exceeding the original threshold at 23.8%. This suggests that there are different types of loads participating in WDR with different load profiles and hence different accuracy scores.

The average bias scores were significantly lower than the 4% threshold for both eligibility and compliance testing, ranging from 0% to 3.4%.

<sup>8</sup> Only NMI's that passed the compliance test were included in the accuracy and bias statistics.

<sup>9</sup> Minimum, maximum and average values calculated from absolute bias scores.

<sup>10</sup> Only NMI's that passed the compliance test were included in the accuracy and bias statistics.

<sup>11</sup> Minimum, maximum and average values calculated from absolute bias scores.

**Table 7 Composite (BM4) – Eligibility assessment and compliance testing results**

|         | Eligibility Assessment |                      | Compliance Testing <sup>12</sup> |        |
|---------|------------------------|----------------------|----------------------------------|--------|
|         | Accuracy %             | Bias % <sup>13</sup> | Accuracy %                       | Bias % |
| Minimum | 3.6                    | 0.0                  | 5.1                              | 0.0    |
| Maximum | 19.5                   | 3.4                  | 23.8                             | 2.7    |
| Average | 13.0                   | 0.7                  | 12.7                             | 0.6    |

### 2.4.1 Trends in accuracy and bias

The average accuracy and bias scores for eligibility assessment over the past three years for each BM are shown in Table and Table . As shown, there has, in general, been an increase in the average accuracy scores for all baseline methodologies used (BM1, BM2 and BM4) over time, potentially indicating the increase in the number of more variable loads participating in WDR. There are no clear trends evident for bias scores over time.

**Table 8 Eligibility assessment – average accuracy score over time**

|                        | All Days (BM1) | Business Days (BM2) | Non-Business Days (BM3) | Composite (BM4) |
|------------------------|----------------|---------------------|-------------------------|-----------------|
| Nov 2021 - Jun 2022    | -              | 14.7%               | -                       | 8.8%            |
| Jul 2022 – Jun 2023    | 9.7%           | -                   | -                       | 10.0%           |
| Jul 2023 – Jun 2024    | -              | -                   | -                       | 15.2%           |
| Jul 2024 – 30 May 2025 | 12.9%          | 19.4%               | -                       | 13.0%           |

**Table 9 Eligibility assessment – average bias score over time**

|                        | All Days (BM1) | Business Days (BM2) | Non-Business Days (BM3) | Composite (BM4) |
|------------------------|----------------|---------------------|-------------------------|-----------------|
| Nov 2021 - Jun 2022    | -              | 3.0%                | -                       | 0.4%            |
| Jul 2022 – Jun 2023    | 0.4%           | -                   | -                       | 1.4%            |
| Jul 2023 – Jun 2024    | -              | -                   | -                       | 0.4%            |
| Jul 2024 – 30 May 2025 | 0.6%           | 1.2%                | -                       | 0.7%            |

<sup>12</sup> Only NMI's that passed the compliance test were included in the accuracy and bias statistics.

<sup>13</sup> Minimum, maximum and average values calculated from absolute bias scores.

The average accuracy and bias scores for compliance testing over the past two years (compliance testing completed in June 2022, May 2023, May 2024 and May 2025) for each BM are shown in Table 10 and Table 11. There is a general trend of increasing baseline accuracy scores across all the BM.

**Table 10 Compliance assessment – average accuracy score over time**

|           | All Days (BM1) | Business Days (BM2) | Non-Business Days (BM3) | Composite (BM4) |
|-----------|----------------|---------------------|-------------------------|-----------------|
| June 2022 | -              | 14.7%               | -                       | 8.9%            |
| May 2023  | 10.8%          | 16.1%               | -                       | 6.9%            |
| May 2024  | 11.0%          | -                   | -                       | 8.0%            |
| May 2025  | 12.8%          | 16.9%               | -                       | 12.7%           |

**Table 11 Compliance assessment – average bias score over time**

|           | All Days (BM1) | Business Days (BM2) | Non-Business Days (BM3) | Composite (BM4) |
|-----------|----------------|---------------------|-------------------------|-----------------|
| June 2022 | -              | 0.9%                | -                       | 0.3%            |
| May 2023  | 0.4%           | 1.3%                | -                       | 0.2%            |
| May 2024  | 0.2%           | -                   | -                       | 0.7%            |
| May 2025  | 0.9%           | 1.1%                | -                       | 0.6%            |

## 2.5 Baseline non-compliance

When AEMO conducted baseline compliance testing before summer and winter (November 2024 and May 2025), a number of NMI (see Table 10 and Table 11) failed to meet the required accuracy and/or bias thresholds for the baseline compliance test. This can occur for a number of reasons, such as a significant change in plant operations or business model or a seasonal characteristic of the particular load. Such NMIs are set as non-compliant in AEMO's systems and are unable to participate in WDR until they pass baseline compliance testing at a future date. A DRSP may also re-submit an amended application for compliance testing if appropriate, using 'exclusion days' to remove any abnormal loads from the baseline compliance testing calculation.

The DRSPs for all NMIs that were found to be baseline non-compliant in the reporting period provided an available capacity of zero for the Wholesale demand response unit (WDRU). There were no periods in which a baseline non-compliant WDRU was dispatched.

For summer compliance testing, nine NMIs failed the compliance test, seven of which were BM1 and the other two were BM4. Of these, six NMIs became compliant after winter compliance testing, two still remain non-compliant and one NMI has been declassified.

**Table 12 2024/2025 summer compliance testing – completed November 2024**

|   | All Days (BM1) | Business Days (BM2) | Non-Business Days (BM3) | Composite (BM4) | Total |
|---|----------------|---------------------|-------------------------|-----------------|-------|
| <b>Total number of NMI</b> s                          | 17             | 0                   | 0                       | 17              | 34    |
| <b>Number of NMI</b> s that failed compliance testing | 7              | 0                   | 0                       | 2               | 9     |
| <b>% of NMI</b> s failing compliance testing          | 41%            | -                   | -                       | 12%             | 26%   |

For winter compliance testing, three NMIs failed the compliance testing, with one failing to meet both the accuracy and bias thresholds.

**Table 13 2025 winter compliance testing – completed May 2025**

|   | All Days (BM1) | Business Days (BM2) | Non-Business Days (BM3) | Composite (BM4) | Total |
|---|----------------|---------------------|-------------------------|-----------------|-------|
| <b>Total number of NMI</b> s                          | 67             | 5                   | 0                       | 86              | 158   |
| <b>Number of NMI</b> s that failed compliance testing | 3              | 0                   | 0                       | 0               | 3     |
| <b>% of NMI</b> s failing compliance testing          | 4%             | 0%                  | -                       | 0%              | 2%    |

## 2.6 Improvements to WDR provision

AEMO intends to review two existing WDR mechanism processes:

- (i) the DNSP endorsement process and
- (ii) the baseline methodology proposal and assessment process.

The review of these processes is in response to participant feedback during the consultation on proposed baseline methodologies completed over the past year. This review is expected to commence in the coming months, with the results of the review and any associated changes to be detailed in the 2026 WDR Annual Report.

There have been no significant changes to the Portfolio Management System (PMS) used by DRSPs in the 2024/25 financial year. There has been an increase in number of NMIs it is possible to upload within an application and the baseline accuracy threshold has been adjusted to align with the 30% trial metric.



## 2.7 Suitability of eligibility and compliance methodology

Under clause 2.8 of AEMO's WDRM Baseline Eligibility, Metrics and Compliance Policy<sup>14</sup>, AEMO committed to undertaking an annual review of the suitability of the eligibility and compliance methodology as well as the metrics thresholds.

### 2.7.1 Eligibility assessment

There are 158 registered NEMs and 23 event days of WDR in the past year (a total of 92 event days since November 2021), allowing AEMO to draw some conclusions regarding the long-term efficacy of eligibility and compliance methodology and the accuracy and bias thresholds. As shown in Section 2.4, the NEMs registered for WDR, when tested for eligibility, have a wide variety of accuracy and bias characteristics, with an average accuracy and bias values well within the (trial) 30% and  $\pm 4\%$  thresholds respectively. This suggests that WDR and baseline methodologies employed, together with the eligibility assessment methodology, are able to facilitate WDR participation by a variety of load types.

AEMO has not observed significant eligibility failure rates among NEMs proposed for classification by DRSPs, nor encountered loads which should be suitable for WDR but have been excluded due to the eligibility assessment criteria or the thresholds. AEMO has received some feedback that the eligibility assessment methodology and accuracy thresholds may be limiting participation of otherwise suitable loads in the WDR Mechanism and has pursued new methodology options and a higher accuracy threshold trial to support broader participation.

### 2.7.2 Compliance testing

With regards to the compliance testing methodology, the sixth and seventh bi-annual compliance test for all NEMs were undertaken at the end of November 2024 and at the end of May 2025, respectively. The compliance testing ran smoothly. Most NEMs tested had very similar accuracy and bias statistics in the compliance test as seen in the eligibility assessment, suggesting that their loads are largely predictable and supporting their suitability for WDR participation.

As discussed in Section 2.5, some NEMs did fail the compliance test due to exceeding the accuracy and/or bias thresholds. The observed reasons for failure were not related to the testing methodology, but a result of changing load patterns or seasonality of load. AEMO has made the decision to implement new methodology options to better cater to more seasonal loads (see Section 2.3). Some of the non-compliant NEMs have become baseline compliant again, due to changing circumstances and/or seasonality changes in the future, while others may choose to declassify.

### 2.7.3 Accuracy and bias thresholds

Based on its consultation on baseline methodologies over the past year, AEMO is trialling a higher accuracy threshold of 30% for eligibility assessment and compliance testing as an additional measure to address

<sup>14</sup> [https://aemo.com.au/-/media/files/stakeholder\\_consultation/consultations/nem-consultations/2020/wdrm-becm-policy/first-round/baselines-eligibility-compliance-and-metrics-policy.pdf?la=en](https://aemo.com.au/-/media/files/stakeholder_consultation/consultations/nem-consultations/2020/wdrm-becm-policy/first-round/baselines-eligibility-compliance-and-metrics-policy.pdf?la=en)



stakeholder concerns around the restrictiveness of the WDR Mechanism's eligibility requirements. This new setting is currently available to participants.

AEMO will review the outcomes of this trial against defined assessment criteria and determine whether to retain the higher threshold, likely in alignment with the 2026 or 2027 WDR Annual Reports.

The bias metrics remain unchanged.

#### 2.7.4 Other settings

With the introduction of new baseline methodologies and the trial of a new accuracy threshold, AEMO believes that all other baseline settings relevant to the eligibility and compliance methodology, including the baseline adjustment cap, selected days, baseline window, baseline adjustment window, required number of eligibility days and required number of compliance days are working as intended and require no further adjustment at this time.

## 3 WDR performance

### 3.1 DRSPs and WDRUs

The number of registered DRSPs and the number and capacity of WDRUs over the past four years is shown in Table below. As shown, there has been a small increase in WDRUs and decrease in WDRU capacity over the past year, with two DRSP currently part of WDRM.

**Table 14 DRSPs, WDRUs and total capacity**

| Date      | Registered DRSPs | WDRUs | Total WDRU capacity |
|-----------|------------------|-------|---------------------|
| June 2022 | 1                | 12    | 61.6MW              |
| June 2023 | 1                | 13    | 65.3MW              |
| June 2024 | 1                | 15    | 63.0MW              |
| May 2025  | 2                | 20    | 74.4MW              |

### 3.2 Wholesale demand response dispatch and pricing

A total of 240<sup>15</sup> MWh of WDR was dispatched between 1 July 2024 and 30 May 2025, and a total of 1,000<sup>16</sup> MWh since the mechanism began in October 2021. From July 2024, WDR dispatch occurred in the NSW, QLD and VIC regions. There has been no dispatch in SA so far, this financial year.

**Table 15 WDR dispatched over time**

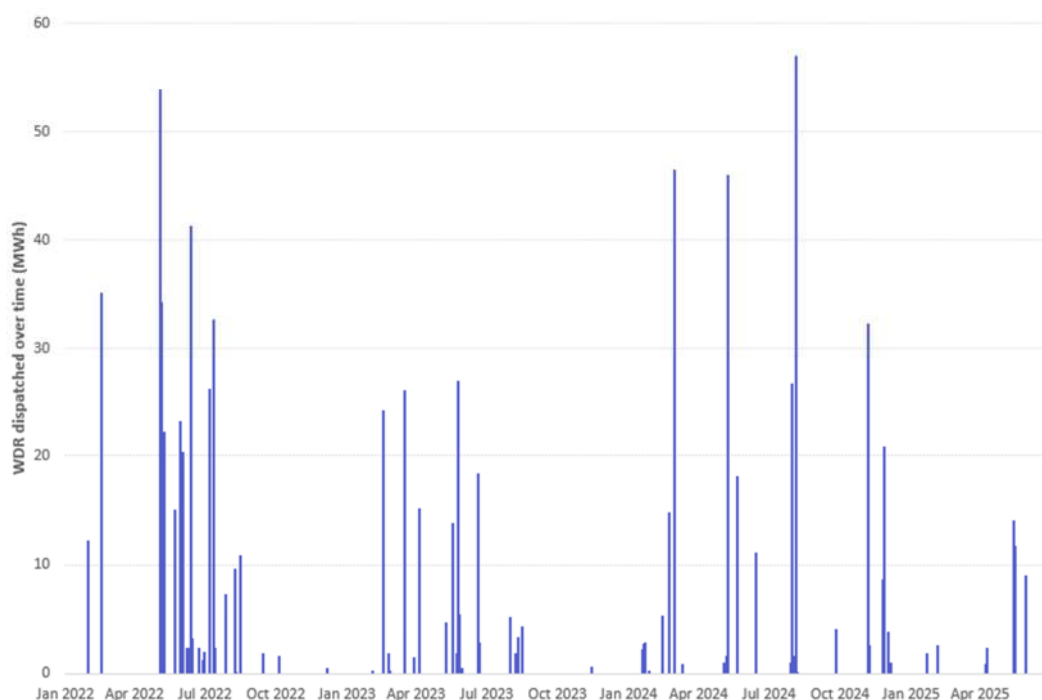
| Date                     | WDR dispatched | Number of days with WDR events |
|--------------------------|----------------|--------------------------------|
| Oct 2021 – Jun 2022      | 348 MWh        | 21                             |
| July 2022 – Jun 2023     | 245 MWh        | 30                             |
| July 2023 – June 2024    | 167 MWh        | 18                             |
| July 2024 – 30 May 2025  | 240 MWh        | 23                             |
| Total since start of WDR | 1000 MWh       | 92                             |

<sup>15</sup> WDR calculated from metered energy minus baseline energy

<sup>16</sup> WDR calculated from metered energy minus baseline energy

The amount of WDR dispatched over time is shown in Figure 2 below. There were relatively few events over all three summer periods, likely due to relatively low prices. In 2021-22, WDR dispatch activity increased significantly from May onwards. For 2022-23, WDR events happened sporadically from February, increasing in frequency over the May to June timeframe. In 2023-24, there are two significant spikes, one at the end of February and the other at the start of May. For 2024-25, the majority of WDR dispatch occurred in August 2024, November 2024 and May 2025.

**Figure 2 WDR dispatched over time (MWh)**



The average volume weighted price for WDR per region is shown in Table . NSW had the highest number of WDR events and the highest dispatch volumes. Both NSW and VIC had WDR dispatched at a lower average volume weighted price than the previous year (~\$4,000 per MWh). As QLD had very small amounts of WDR dispatched and SA had no dispatch for 2024/25, there are no particular conclusions drawn from the average volume weighed price for those regions.

**Table 16 Average Volume Weighted Price (\$/MWh) for WDR per region <sup>17</sup>**

|                           | NSW     | QLD     | SA      | VIC     |
|---------------------------|---------|---------|---------|---------|
| <b>Jul 22 - Jun 23</b>    | \$2,084 | \$832   | \$284   | \$732   |
| <b>Jul 23 - 7 Jun 24</b>  | \$7,162 | \$1,312 | \$5,778 | \$7,119 |
| <b>Jul 24 – 30 May 25</b> | \$4,061 | \$5,890 | -       | \$3,746 |

<sup>17</sup> The average volume weighted price is calculated based on dispatch volume and not trade volume.

### 3.3 Non-conformance

Dispatch conformance is assessed at an interval (MW) and settlement day (MWh) level as outlined in Section 3 of the Post-Event Dispatch Conformance Policy<sup>18</sup>. Due to the small size of most WDRUs (i.e. 14 out of 20 being under 6MW in size) and the interval MW error non-conformance threshold being 6MW, the interval assessment shows no intervals have been deemed as non-conforming (i.e. demand response is not within 6MW of the dispatch target) over the past year.

From a settlement day perspective, 21 out of 95 dispatch events have been deemed non-conforming (per dispatchable unit identifier (DUID) settlement day) in the reporting period. At the settlement day level, there was a total of 32 MWh of non-conformance for the reporting period. However, eight dispatch events relating to 23 MWh were due to accidental bids.

There were a small number of DUIDs with non-conformance occurrences, with no DUID reaching the rules prescribed three event limit in the reporting period.

The frequency and extent of WDRUs declared to be non-conforming under NER 3.8.23(a) since the start of WDR is shown in Table below. As shown, non-conformance has been minor over both the 2022-23 to 2023-24 reporting periods. The values for 2024-25 are larger, however if the accidental bid dispatch events are excluded, then there are 13 non-conforming dispatch events for a total of 8 MWh (similar to the previous years).

**Table 17 Non-conformance measures over time**

|                    | Non-conformance frequency (Trading Intervals) | Extent of non-conformance – Interval (MW) | Non-conformance frequency    | Extent of non-conformance Settlement Day (MWh) |
|--------------------|---|---|------------------------------|--|
| Jul 22 – Jun 23    | None  | 0 MW                                      | 16 out of 81 dispatch events | 9 MWh  |
| Jul 23 – Jun 24    | None  | 0 MW                                      | 5 out of 38 dispatch events  | 5 MWh  |
| Jul 24 – 30 May 25 | None  | 0 MW                                      | 21 out of 92 dispatch events | 32 MWh   |

### 3.4 WDR effect on market ancillary services

Due the low volume/size of WDR dispatch to date, there is no perceivable effect of WDR in the procurement and use of market ancillary services.

<sup>18</sup> <https://aemo.com.au/-/media/files/initiatives/wdr/2021/post-event-dispatch-conformance-policy.pdf?la=en>

# Glossary

This document uses many terms that have meanings defined in the National Electricity Rules (NER). The NER meanings are adopted unless otherwise specified. The meanings of other acronyms used in this report are set out in the following table.

| Term        | Definition                                |
|-------------|---|
| <b>AEMC</b> | Australian Energy Market Commission       |
| <b>AEMO</b> | Australian Energy Market Operator Limited |
| <b>BL</b>   | Baseline                                  |
| <b>BM</b>   | Baseline methodology                      |
| <b>DNSP</b> | Distribution Network Service Provider     |
| <b>DRSP</b> | Demand Response Service Provider          |
| <b>DUID</b> | Dispatchable unit identifier              |
| <b>NEM</b>  | National Electricity Market               |
| <b>NER</b>  | National Electricity Rules                |
| <b>NMI</b>  | National metering identifier              |
| <b>WDR</b>  | Wholesale demand response                 |
| <b>WDRM</b> | Wholesale demand response mechanism       |
| <b>WDRU</b> | Wholesale demand response unit            |