



Price Responsive Reporting Guidelines

Part of the Integrating Price Responsive Resources (IPRR) rule

Final Report – Standard consultation
for the National Electricity Market

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Executive summary

The publication of this final report concludes the standard consultation procedure conducted by AEMO to develop the Price Responsive Reporting Guidelines (the **proposal, Guidelines**) under National Electricity Rules (**NER**) clauses 3.10C.2(e)-(g) and 11.180.3, following the procedure in NER 8.9.2.

AEMO developed the Guidelines as part of the implementation of the Integrating price-responsive resources (**IPRR**) into the National Electricity Market (**NEM**) reform project.

On 19 December 2024, the Australian Energy Market Commission (**AEMC**) made a final rule (National Electricity Amendment (Integrating price-responsive resources into the NEM) Rule 2024) to allow aggregated consumer energy resources (**CER**) to be scheduled and dispatchable in the NEM. The parts of the rule that relate to the Guideline will commence on 1 January 2026.

AEMO published its draft proposal on how the requirements and processes specified in NER 3.10C could be met in the second stage consultation documents available on AEMO's consultation page. In response, two submissions were received. AEMO thanks these stakeholders for their feedback on the proposal.

The submissions proposed:

- addition of normalised forecast metrics,
- inclusion of electric vehicle (**EV**) data, and
- use of event-based reporting.

The final Guidelines have been updated to incorporate the first suggestion, while no changes were necessary for the other two, as while not specifically mentioned in the Guidelines, inclusion of this information is intended. It was decided to keep the Guidelines high-level and flexible, to evolve as new data (such as EV) becomes available and AEMO gets experience in what event-based reporting is valuable.

The submissions also included a number of minor comments, which are addressed in this final report.

AEMO's final determination on the proposal is to amend the AEMO Price Responsive Reporting Guidelines in the form published with this final report, with an effective date of **10 December 2025**.

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1. Stakeholder consultation process

As required by NER 3.10C.2(e)-(g), AEMO has consulted on the AEMO Price Responsive Reporting Guidelines (the **proposal, Guidelines**) in accordance with the Standard rules consultation procedure in NER 8.9.2.

Note that this document uses terms defined in the NER, which are intended to have the same meanings.

AEMO's process and timeline for this consultation has been as follows, noting that as per NER 11.180.3, AEMO has to publish the final AEMO Guidelines by 31 December 2025.

Table 1 Consultation process and timeline

Consultation steps	Dates
Publication of Final High Level Implementation Assessment for Integrating Price Responsive Resources into the NEM	Thursday, 20 March 2025
Consultation paper published	Thursday, 10 April 2025
Presentation to Electricity Wholesale Consultative Forum	Tuesday, 6 May 2025
Submissions due on consultation paper	Tuesday, 17 June 2025
Draft report published	Monday, 18 August 2025
Submissions due on draft report	Friday, 10 October 2025
Final report published	Wednesday, 10 December 2025

AEMO's consultation webpage for the Proposal is <https://aemo.com.au/consultations/current-and-closed-consultations/price-responsive-reporting-guidelines-consultation>, containing all previous published papers and reports, written submissions, and other consultation documents or reference material.

In response to its consultation paper on the Proposal, AEMO received two written submissions. The submissions can be found via the link above.

AEMO considered these submissions and other relevant information in developing the final determination on the proposal.

AEMO thanks all stakeholders for their feedback on the proposal throughout this consultation, which has been considered in preparing this final report.

2. Background

2.1. Context for this consultation

On 19 December 2024, the AEMC made the National Electricity Amendment (Integrating price responsive resources into the NEM) Rule 2024¹ (IPPR Rule), which establishes a framework called "dispatch mode" that allows aggregated price responsive resources (PRR) including consumer energy resources (CER), other distributed energy resources (DER) and price-responsive loads, to be scheduled and dispatchable in the NEM.

Currently, unscheduled PRR are not able to participate in dispatch, meaning they are not effectively integrated into the NEM's planning and operation functions, and are not visible to AEMO or the electricity market. Inability to participate in dispatch and energy markets therefore restricts these currently unscheduled PRR from contributing to the real-time matching of supply and demand, and from potential value streams accessible to scheduled resources in the market that could enhance benefits to consumers who own CER, such as regulation frequency control ancillary services (FCAS).

The IPPR Rule is the outcome of the rule change request process that was initiated by AEMO's January 2023 rule change proposal for the 'Scheduled Lite Mechanism'. This rule change request was developed in accordance with the final recommendations made by the Energy Security Board (ESB) to Energy Ministers as part of its Post 2025 Market Design work².

Many PRR will not be capable of participating, or will not choose to participate, in dispatch mode. As the magnitude of these resources grows, AEMO will face further challenges forecasting demand in the NEM. To help understand the magnitude of this issue, the IPPR Rule introduces monitoring and reporting functions for AEMO and the Australian Energy Regulator (AER) that will position the market bodies and participants to evaluate the impact of unscheduled PRR on AEMO's forecasts.

2.2. NER requirements

This section outlines the requirements placed on AEMO by the IPPR Rule in relation to reporting on unscheduled PRR. NER 3.10C.2 states:

Objective of AEMO reporting

(a) The objective of the monitoring and reporting framework established by this clause is for AEMO to:

*(1) monitor and report on the impacts of unscheduled price responsive resources on forecast deviations;
and*

(2) identify market outcomes as a result of the use of unscheduled price responsive resources.

Annual reporting

(b) By 30 September each year, AEMO must prepare and publish, in accordance with the AEMO price responsive reporting guidelines, a report which includes the following information in respect of the previous financial year:

(1) an analysis of the statistics and trends of:

¹ See <https://www.aemc.gov.au/rule-changes/integrating-price-responsive-resources-nem>.

² See <https://esb-post2025-market-design.aemc.gov.au/>.

(i) the volumes and types of unscheduled price responsive resources reported by Registered Participants, using the DER register information and demand side participation information; and

Note

AEMO must report on demand side participation information, no less than annually, under rule 3.7D(c).

AEMO may use DER register information for the purpose of the exercise of its statutory functions under the NEL or Rules under rule 3.7E(e).

(ii) patterns in forecast deviations, including to the extent identifiable, the approximate contribution of unscheduled price responsive resources to forecast deviations, in response to forecast and actual spot prices;

(2) AEMO's best estimate of the impact of unscheduled price responsive resources on forecast deviations in relation to additional amounts paid to:

(i) Ancillary Service Providers for additional ancillary services that are enabled; and

(ii) Cost Recovery Market Participants for ancillary service transaction payments under clause 3.15.6AA;

(3) an assessment of the degree of forecast deviations in regional demand across a range of market conditions, as well as the factors contributing to the size of forecast deviations;

(4) analysis of impacts of unscheduled price responsive resources on the load forecast used by AEMO for pre-dispatch and dispatch, including in comparison with outcomes published in previous reports prepared in accordance with this clause (as applicable);

(5) identification of additional information or inputs required to improve or account for unscheduled price responsive resources in load forecasts;

(6) a description of any actions taken by AEMO to reduce forecast deviations by accounting for unscheduled price responsive resources, where those actions have resulted in improved market outcomes;

(7) a description of:

(i) the methodologies used by AEMO to consider and manage the impacts of unscheduled price responsive resources on load forecasts for pre-dispatch and dispatch; and

(ii) any barriers to AEMO using those methodologies to improve forecasting; and

(8) any other relevant information AEMO considers necessary or convenient to include in the report.

Quarterly data

(c) AEMO must develop, publish and maintain a single source of information for unscheduled price responsive resources that presents the information and metrics specified by the AEMO price responsive reporting guidelines.

(d) AEMO must update the information published under paragraph (c) when new information becomes available and at least once each calendar quarter.

AEMO price responsive reporting guidelines

(e) AEMO must develop and publish, and may amend, the AEMO price responsive reporting guidelines in accordance with the Rules consultation procedures.

(f) The AEMO price responsive reporting guidelines must specify:

- (1) how AEMO will meet its reporting obligations under paragraph (b); and*
- (2) the information and metrics that AEMO will include in the reporting required pursuant to paragraph (c).*

(g) In satisfying its obligations under paragraphs (b) and (c), AEMO may:

- (1) utilise existing AEMO monitoring and reporting frameworks under the Rules;*
- (2) utilise data, reports and systems otherwise available to AEMO; and*
- (3) take into account or include any other information that AEMO reasonably considers relevant to meet the objective set out in paragraph (a).*

Furthermore, the transitional rules in NER 11.180.3 state:

(a) For the purposes of new clause 3.10C.2(c), AEMO is not required to publish the single source of information until 1 April 2026, in respect of information for the preceding calendar quarter.

(b) By 30 September 2026, AEMO must publish the first report required by new clause 3.10C.2(b).

(c) The first annual report published by AEMO pursuant to paragraph (b) is not required to cover the entire financial year ending 30 June 2026, but instead, must:

- (1) cover the period from 1 January 2026 to 30 June 2026; and*
- (2) also include an analysis of trends in the use and impact of unscheduled price responsive resources over the preceding three years, where such analysis is based on information reasonably available to AEMO at the time.*

2.3. The national electricity objective

Within the specific requirements of the NER applicable to this proposal, AEMO will seek to make a determination that is consistent with the national electricity objective (**NEO**) and, where considering options, to select the one best aligned with the NEO.

The NEO is expressed in section 7 of the National Electricity Law as:

to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:

- (a) price, quality, safety, reliability and security of supply of electricity; and*
- (b) the reliability, safety and security of the national electricity system; and*
- (c) the achievement of targets set by a participating jurisdiction—*
 - (i) for reducing Australia's greenhouse gas emissions; or*
 - (ii) that are likely to contribute to reducing Australia's greenhouse gas emissions.*

3. Discussion of material issues

Two submissions were received, from PowerSync Technologies (**PST**) and Energy Queensland (**EQL**). The material issues raised in the submissions are covered below.

3.1. Publication of normalised metrics

3.1.1. Issue summary and submissions

As a comment to the forecast accuracy metrics to be published, **PST** agreed with the proposed Root Mean Squared Error (**RMSE**) and Mean Bias Error (**MBE**) metrics, but also suggested AEMO publish normalised measures, such as Normalised RMSE (**NRMSE**), for comparability across regions and seasons.

3.1.2. AEMO's assessment

AEMO agrees adding NRMSE and Normalised Mean Bias Error (**NMBE**) will be useful to better compare accuracy in some instances by accounting for different magnitudes of load across different times of day, year and regions.

3.1.3. AEMO's conclusion

AEMO has added NRMSE and NMBE to the Final Guidelines.

3.2. Inclusion of EV data

3.2.1. Issue summary and submissions

EQL suggested that EV data should be explicitly considered within the reporting framework.

3.2.2. AEMO's assessment

AEMO agrees that visibility of EV uptake and EV charging behaviour is increasingly important to forecast demand accurately. Improving visibility of EVs and EV supply equipment (**EVSE**) has been considered for some time.

Previously, AEMO proposed amendments to the NER that placed an obligation on distribution network service providers (**DNSPs**) to collect and provide EVSE data in the DER Register. This rule change request was however later retracted by AEMO due to several key challenges that were identified, and initiatives to improve EV data visibility were rather pursued through a regulatory work program under the National CER roadmap³, and a non-regulatory work program led by AEMO. This non-regulatory work program included the publication of an EV Data Recommendations Paper⁴ by AEMO with several recommendations, including to share more frequent EV uptake insights through AEMO's quarterly reporting obligations for unscheduled PRR under a potential future data sharing arrangement with the National Exchange of Vehicle and Driver Information System (**NEVDIS**).

Once AEMO receives this EV uptake data through NEVDIS, or another official EV data set exists, governed by the NER, AEMO will incorporate that into the quarterly and annual publications, similar to the DER register data and the data collected from the annual Demand Side Participation (**DSP**) Information survey.

³ See <https://www.energy.gov.au/sites/default/files/2024-07/national-consumer-energy-resources-roadmap.pdf>.

⁴ See <https://www.aemo.com.au/-/media/files/initiatives/electric-vehicles/electric-vehicle-data-recommendations-paper.pdf>.

In the meantime, AEMO intend to publish available EV information as supplementary information (see the Guidelines sections 3.2.3 and 3.3.3), for example pointing to EV tariff data from the DSP Information survey or the EV data in the Inputs, Assumptions and Scenario (**IASR**) report from the Integrated System Plan (**ISP**) process.

AEMO will also continue to ask DNSPs for available EV data available to them in the Annual Information Request to help building joint industry understanding of EVs, though the data collected may not be in a suitable format to share in the PRR reporting.

3.2.3. AEMO's conclusion

AEMO will seek to publish available EV data as supplementary data till an official EV dataset governed by the NER becomes available.

3.3. Event-based reporting

3.3.1. Issue summary and submissions

For assessing the impact of unscheduled PRR on forecast deviations, PST suggested AEMO use event-based tests from AEMO's existing datasets in addition to correlation, for example comparing matched intervals with/without a price spike, binding constraint, or Lack of Reserve (**LOR**) declarations.

3.3.2. AEMO's assessment

AEMO plans to explore this as part of the annual PRR reporting, as this will be most meaningful with written commentary, and it is not at this point clear what "events" it will be most relevant to cover. The annual reporting will show all the automated reporting from the quarterly reporting and add to this the any additional insight AEMO can bring, both through additional assessments, such as impact during LOR events, and commentary of the trends (if any) shown.

3.3.3. AEMO's conclusion

Without knowing if the event-based reporting will provide any value, AEMO will not prescribe it into the Guidelines, but AEMO will explore event-based tests in the annual report.

4. Other matters

In addition to the issues raised above, the submissions also included a number of comments, which AEMO will respond to below.

4.1. Number of years of data reported

PST agreed with AEMO's proposal of using calendar quarters as basis for the reporting and to report three years of data as a minimum, though noting that five years would improve the robustness of which trends could be identified.

AEMO does agree longer periods are better to pick up trends in a stable environment, but this may not be the case during a rapid transition. AEMO may, where meaningful and data is available, publish a longer history than three years, and should also note that demand data is on some occasions updated for example to correct from known data issues.

4.2. Underlying demand and distributed PV (DPV) estimates

PST noted that it was important to flag that when using the underlying demand lens, DPV would be based on a 30-minute estimate; therefore, for dispatch (five-minute) accuracy, the operational lens is the comparable series.

AEMO's proposal is for the time being not to provide any statistics for underlying demand for dispatch, as DPV data is not available. AEMO has initiated work to get DPV estimates at five-minute resolution, and when that is in place, it will add underlying demand statistics for dispatch too, although noting that initially it will not have three years of historical data for this new data stream.

4.3. Collection of additional data from participants

In its submission, **PST** noted it would not support reporting that required additional data submissions to AEMO from PRR participants.

No additional information from stakeholders is proposed as part of this consultation. To meet future needs of the energy industry, data collected may need to evolve, which would be triggered through consultation of the relevant guidelines, such as DER Register Guidelines and DSP Information Guidelines.

AEMO, along with many other industry parties, will increasingly rely on quality reporting into the DER register and DSPI survey, and it is important all help with that regard, to improve visibility of PRR and CER/DER overall.

5. Final determination on proposal

Having considered the matters raised in submissions to the draft report, AEMO's final determination is to amend the AEMO Price Responsive Reporting Guidelines in the form published with this final report, in accordance with NER 3.10C.2(e)-(g) and 11.180.3.

The final AEMO Price Responsive Reporting Guidelines differ from the draft published with the draft determination mainly with the addition of NRMSE and NMBE to the Final Guidelines.

Effective date

AEMO's proposed effective date for the determination is **10 December 2025**, which is the planned publication date for the Guidelines.