

Review of AEMO Operational Forecasting in the WEM: Information Paper

August 2026

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1. Introduction

On 24 July 2025, the Department of Energy and Economic Diversification (DEED) published the [Operational Forecasting in the WEM Review: Consultation Paper](#) (Consultation Paper) outlining the proposed review outcomes from the Coordinator of Energy's (Coordinator's) Review of Australian Energy Market Operator's (AEMO's) Operational Forecasting in the Wholesale Electricity Market (WEM).

The purpose of the review was to identify and recommend near-term improvements to the AEMO's operational forecasting processes. DEED included six proposals in the Consultation Paper to ensure that AEMO's processes are fit-for-purpose and aligned with best practices in the National Electricity Market (NEM) and internationally.

DEED has refined the proposals after consideration of stakeholder submissions received during the consultation process. This Information Paper includes the Review Outcomes for five of the proposals:

1. Reconsider blending parameters;
2. Enhance collaboration with weather providers;
3. Enhance documentation and processes;
4. Address the lack of incentive to produce accurate intermittent generation forecasts; and
5. Publish operational forecasting metrics.

DEED considers that further consultation is required for Proposal 6 (formalise large load information and provision) and intends to publish a separate consultation paper on this proposal in due course.

Proposals 1, 2 and 3 are recommendations for actions to be undertaken by AEMO.

Table 1 provides details of AEMO's progress to date and future plans in respect of these proposals.

The implementation of Proposals 4 and 5 require changes to the ESM Rules. Sections 2.2 and 2.3 provide details of the final proposals and their rationale. An Exposure Draft of Electricity System and Market (ESM) Amending Rules to implement Proposals 4 and 5 is published separately for consultation.

This paper also summarises and provides a response to stakeholder submissions on the proposals presented in the Consultation Paper (**Appendix A**).

2. Review Outcomes and Rationale

2.1. Overview of review outcomes

Table 1 provides an overview of Proposals 1-5 together with their supporting rationales.

Stakeholders were generally supportive of Proposals 1-3, which have not been modified following the consultation period.

The views expressed in submissions on Proposal 4 were mixed, with three submissions supporting the proposal and three raising concerns about implementation costs.

DEED has worked with AEMO since the consultation period on options to address the cost concerns raised in submissions. The refined proposal delivers central forecasting for the majority of the WEM's intermittent generation capacity, while reducing implementation costs for both Market Participants and AEMO. Details of the review outcomes for Proposal 4 are provided in section 2.2.

Stakeholders were also generally supportive of Proposal 5. Following consultation, DEED has refined the proposal details to address specific implementation cost concerns raised by AEMO. Details of the review outcomes for Proposal 5 are provided in section 2.3.

Table 1: Review Outcomes

Review Outcome	Rationale
1 – Reconsider blending parameters	
AEMO should review its approach to persistence forecasting and how these forecasts are blended with foundation forecasts.	Current blending parameters drive material forecast errors when there are fast changes in demand or supply. For periods such as the “solar shoulders” this is predictable and can be better accounted for in forecasts.
AEMO should consider shortening the period over which it blends these forecasts, blending differently for different sites, or not blending at all and adopting an alternate approach.	Therefore, refining the blending approach can improve operational forecasting.
2 – Enhance collaboration with weather providers	
AEMO should enhance collaboration with a number of weather providers to improve weather forecasts used in demand forecasting and especially for intermittent generation resource availability forecasts. Specifically, the focus should be on	Limitations to weather data inputs restrict the granularity and accuracy of operational forecasts produced by AEMO. Ways to drive improvement in these outputs should be investigated in collaboration with weather information providers as they

Review Outcome	Rationale
improving the quality, frequency and understanding of uncertainty of weather forecasts and enabling delivery of these forecasts in a state that can inform market forecasts.	could materially improve market outcomes. This is common practice in other jurisdictions.
3 – Enhance documentation and processes	
AEMO should develop documentation of its forecasting processes, including how it is implemented in its forecasting model, as well as a technical specification for the model.	Model documentation, including a detailed technical specification, is important for operability, transparency and reproducibility. This should also minimise institutional knowledge loss and improve effective onboarding.
AEMO should review the use of its separate development and production environments for its forecasting system and the change management processes in place.	AEMO should minimise risk where possible by ensuring a robust change management system for its operational forecasts.
4 - Address the lack of incentive to produce accurate intermittent generation forecasts	
Intermittent generation forecasts used in the WEM Dispatch Engine (WEMDE) should be produced by AEMO. Participants should be required, under the rules, to provide necessary information for AEMO to produce these forecasts.	The analysis presented in the Consultation Paper indicates that intermittent generation forecast inaccuracy is already a significant cause of market inefficiency. The potential benefits of more accurate forecasts will continue to grow as the level of intermittent generation in the SWIS increases.
To minimise implementation costs:	Participants with intermittent generation currently have limited incentive to forecast accurately or improve forecasts over time.
- Only Semi-Scheduled Facilities (SSFs) comprising wind and/or solar photovoltaic (PV) energy producing units will be subject to central forecasting. SSFs containing other types of energy producing units or material levels of Load will continue under the existing forecasting arrangements, as will all Non-Scheduled Facilities (NSFs). - There will be no additional SCADA requirements beyond what is already required for SSFs with wind or solar	Clause 7.4.2 of the ESM Rules requires that participants use “reasonable endeavours” to provide accurate forecasts. “Reasonable endeavours” is difficult to monitor and enforce, and the nature of intermittent generation forecasting is complex. Both of these aspects would likely make enforcement of this clause difficult.

Review Outcome	Rationale
generating units. AEMO will continue to use the real-time Facility Net Available MW SCADA values provided by SSFs for the primary Dispatch Interval forecasts, rather than seeking to determine these values itself from raw SCADA inputs. • Most Market Participants will not be subject to any additional outage reporting obligations. • Implementation will require no changes to the Real-Time Market Submission system and only relatively minor changes to WEMDE. • The Coordinator will commence a review of the forecasting arrangements in the WEM once central forecasting has been in operation for 12 months. Further changes to, or expansion of, the central forecasting arrangements will depend on the outcomes of the Coordinator's Review.	Therefore, there is little to no incentive for participants to produce accurate forecasts and improve them over time. DEED has concluded that assigning responsibility for intermittent generation forecasting to AEMO is the best available option to improve forecast accuracy, for the reasons set out in the Consultation Paper. This will bring the forecasting of intermittent generation in the WEM with the central forecasting practices in other jurisdictions, including the National Electricity Market. The refined review outcome avoids: • the additional complexity and cost caused by the inclusion of other technology types in a Facility; and • the imposition of potentially disproportionate costs on Market Participants with NSFs.

5 – Publish operational forecasting metrics

A rule obligation should be introduced for AEMO to publish metrics for the tracking of forecast and backcast errors for its operational forecasting.	Transparency in operational forecasting accuracy would benefit all energy market stakeholders, through: • allowing participants to better understand the forecasts, including errors in forecasting driven by the increased uptake of DER, and being able to address these as they arise; and • providing evidence of a need for change to commence any future upgrades to the forecasting system.
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Review Outcome	Rationale
5A - Forecast Accuracy Reporting Requirements	
Values to be assessed A report will include analyses of the forecast accuracy of: - Forecast Unscheduled Operational Demand (FUOD) against Unscheduled Operational Demand (UOD) - unconstrained intermittent generation forecasts against the End of Interval (EOI) Quantities, by forecast groups (i.e. Centrally Forecasted Facilities (CFFs), Non-CFF Semi Scheduled Facilities (SSFs) and Non-Scheduled Facilities (NSFs)) and by individual Facility; and - representative forecast intermittent energy source quantities for each CFF against the corresponding real-time measurements.	Allow assessment of the forecast accuracy performance of AEMO, Market Participants and the weather forecasters used by AEMO to determine unconstrained intermittent generation forecasts. Allow overall assessment and comparison of the three intermittent generation groups, as well as identification of specific Facility-related issues. Assessment of intermittent energy source forecast accuracy assists with understanding the source of forecast inaccuracy (inputs versus model) and determining the focus of any remedial actions.
Data exclusions – FUOD analyses AEMO will identify and exclude from its FUOD analyses Dispatch Intervals in which either the forecast value or actual value is unsuitable for comparison, e.g. Affected Dispatch Intervals or Dispatch Intervals in which UOD values are unreliable due to SCADA issues.	Remove spurious data points from the analyses.
Data adjustments – FUOD analyses AEMO will adjust the FUOD values used in its analyses to account for any material reductions arising, for example, from the provision of Contingency Reserve Raise by Interruptible Loads or the provision of services under Supplementary Capacity Contract, that were not expected by AEMO at the time the FUOD value was determined.	Such unexpected events can materially affect UOD. Comparing an unadjusted FUOD with an event-affected UOD would result in large forecast errors that do not reflect AEMO's actual forecasting performance.

Review Outcome	Rationale
Data exclusions – unconstrained intermittent generation AEMO will identify and exclude from the unconstrained intermittent generation forecast analyses: • for each SSF or NSF, any Dispatch Intervals for which the EOI Quantity is unreliable due to SCADA issues; and • for each SSF, any Dispatch Intervals for which the Facility was constrained down by WEMDE in either the forecast Market Schedule or the primary Dispatch Interval.	Remove spurious data points from the analyses.
Reporting of exclusions and adjustments AEMO will specify in its forecast accuracy reports any adjustments or exclusions it makes to the data used in the analyses and the reasons for those adjustments or exclusions.	This is required for transparency and to assist with monitoring the extent of other factors that can effectively reduce forecast accuracy, e.g. SCADA and communications system failures, IT failures and delays in updating forecasting systems to reflect expected or current system events.
Forecasting time horizons The analyses must be conducted over a range of forecasting time horizons, including: • 5 minutes, 30 minutes, 1 hour and 2 hours after the start of the Dispatch Schedule Horizon; • 4 hours, 8 hours, 12 hours and 24 hours after the start of the Pre-Dispatch Horizon; and • the forecasts produced for the third and seventh Trading Day of the Week-Ahead Schedule Horizon.	This representative range of forecasting time horizons is intended to cover the timeframes in which decisions are made that affect market outcomes.
Comparison with previous periods Each report must compare the results for the current quarter with the corresponding results for the previous quarter and the	Assists with the identification of trends and encourages continuous improvement.

Review Outcome	Rationale
quarter commencing on the same day in the previous year.	
Required analyses Each report must include the following analyses: • normalised mean absolute errors; • the boundaries of each quartile of the sets of forecast errors for the quarter; and • for FUOD, the number over-forecasts and under-forecasts by hour of the day.	Normalised mean absolute error (NMAE) is a widely-used measure of forecast accuracy. The quartile analysis allows assessment of the spread of forecast errors. Reporting the number of over-forecasts and under-forecasts by hour of the day allows identification of systemic modelling errors (e.g. over-dependency on persistence forecasting).

2.2. Review Outcome 4: Address the lack of incentive to produce accurate intermittent generation forecasts

While AEMO, Alinta and Perth Energy agreed with the proposal that AEMO should be responsible for intermittent generation forecasts, the APA, the Chamber of Minerals and Energy of WA (CME) and Synergy raised concerns about the potential implementation costs and questioned whether the benefits would be sufficient to justify them. Synergy and CME suggested that further assessment of the costs and benefits was needed before a decision was made to proceed with the change.

AEMO, while supportive of the change to central forecasting, also noted that it would be crucial to implement the proposal as cost-effectively as possible to ensure the benefits are realised.

It is not feasible to conduct a detailed quantitative cost/benefit analysis for a change to centralised intermittent generation forecasting in the WEM, because:

- the extent to which AEMO can improve intermittent generation forecast accuracy cannot be quantified in advance; and
- while improved forecast accuracy brings many benefits, determining an explicit dollar value for these benefits is problematic, because forecast accuracy is only one of a complex set of factors determining market outcomes.

However, this does not mean that the status quo should be retained. The analysis presented in the Consultation Paper indicates that intermittent generation forecast inaccuracy is already a significant cause of market inefficiency. The potential benefits of more accurate forecasts will continue to grow as the level of intermittent generation in the SWIS increases.

The current arrangements provide little incentive to improve intermittent generation forecast accuracy. DEED has concluded that assigning responsibility for intermittent generation forecasting to AEMO is the best available option to improve forecast accuracy, for the reasons set out in the Consultation Paper.

However, DEED acknowledges the cost concerns raised by stakeholders and has worked with AEMO since the consultation period to address these concerns. The refined Proposal 4, which is described in detail below, reduces implementation costs for both Market Participants and AEMO, while supporting the introduction of central forecasting for most of the capacity of the intermittent fleet and providing a pathway for future expansion of the arrangements if warranted.

Under the refined review outcome:

- Only Semi-Scheduled Facilities (SSFs) comprising wind and/or solar photovoltaic (PV) energy producing units will be subject to central forecasting. SSFs containing other types of energy producing units or material levels of Load will continue under

the existing forecasting arrangements, as will all Non-Scheduled Facilities (NSFs). This avoids:

- the additional complexity and cost caused by the inclusion of other technology types in a Facility; and
- the imposition of potentially disproportionate costs on Market Participants with NSFs.
- AEMO has confirmed there will be no additional SCADA requirements beyond what is already required for SSFs with wind or solar generating units. AEMO will continue to use the real-time Facility Net Available MW SCADA values provided by SSFs for the primary Dispatch Interval forecasts, rather than seeking to determine these values itself from raw SCADA inputs.
- Most Market Participants will not be subject to any additional outage reporting obligations.
 - Instead, AEMO will use the total In-Service Capacity values provided by Market Participants in their Real-Time Market Submissions to identify any expected reductions in the Injection capability of a Facility over the forecast horizon.
 - The only likely exception is for wind/solar hybrids, for which a Market Participant may need to provide some additional information to AEMO about the proportions of each generation type on an Outage. AEMO currently considering the most efficient mechanism for the provision of this information.
- Implementation will require no changes to the Real-Time Market Submission system and only relatively minor changes to WEMDE.
- The Coordinator will commence a review of the forecasting arrangements in the WEM once central forecasting has been in operation for 12 months. Further changes to, or expansion of, the central forecasting arrangements will depend on the outcomes of the Coordinator's Review.

Classification of Centrally Forecasted Facilities

An SSF will be eligible for classification as a 'Centrally Forecasted Facility' (CFF) if:

- the Facility only contains wind or solar PV powered energy producing units and Load; and
- the maximum consumption of the Load in the Facility is less than 1 MW.

Appendix 1 (Standing Data) will be extended to include the details that AEMO needs to determine whether a SSF is eligible for classification as a CFF.

Appendix 1 will also be extended to require the provision of an Energy Conversion Model (ECM) for any SSF that is eligible for classification. An ECM is a document that defines how the Intermittent Generating System in an SSF converts its intermittent energy source

(i.e. wind or sunlight) into electrical output. AEMO will be required to document the requirements for an ECM in a WEM Procedure.

AEMO will be required to classify new, eligible SSFs as CFFs from the time the registration of the Facility takes effect.

AEMO will be required to monitor changes to the Standing Data of existing SSFs to determine any changes to their eligibility for classification as a CFF:

- AEMO must classify an existing SSF that becomes eligible for classification no later than 50 days after the relevant Standing Data changes take effect; and
- AEMO must revoke the classification of an SSF that ceases to be eligible for classification effective from the later of the following Trading Day and the Trading Day from which the relevant Standing Data takes effect.

AEMO will be required to publish a register of CFFs on the WEM Website.

Determination and use of Forecasts

AEMO will be required to determine unconstrained Injection and Withdrawal forecasts for each CFF (called 'CFF Unconstrained Injection Forecasts' and 'CFF Unconstrained Withdrawal Forecasts' to distinguish them from the forecasts provided by Market Participants in Real-Time Market Submissions) and use those forecasts as inputs to the Dispatch Algorithm. It is expected that AEMO will:

- produce forecasts for the Week-Ahead and Pre-Dispatch Schedule Horizons using the Facility's ECM, applicable wind and solar forecasts and the In-Service Capacity details provided in Real-Time Market Submissions;
- continue to use Net Available MW Facility SCADA values for the primary Dispatch Interval; and
- continue to use a blending of AEMO-determined forecasts and Net Available MW Facility SCADA values to determine forecasts for the remainder of the Dispatch Schedule Horizon.

AEMO will be required to document its methods and processes for determining CFF Unconstrained Injection Forecasts and CFF Unconstrained Withdrawal Forecasts in a WEM Procedure.

A Market Participant will not be required to provide Unconstrained Injection Forecasts or Unconstrained Withdrawal Forecasts for a SSF once it has been classified by AEMO as a CFF.

Record Keeping Requirements

AEMO will be required to keep records of:

- the CFF Unconstrained Injection Forecasts and CFF Unconstrained Withdrawal Forecasts it determines; and

- the forecast intermittent energy source quantities (e.g. wind speed or solar irradiance) it uses to determine the forecasts, and (if available) the corresponding real-time measurements.

These values will be used as inputs to AEMO's quarterly forecast accuracy reports.

Transitional Arrangements

The implementation of the new central forecasting arrangements will be staged as follows (Note that the dates shown below are based on a provisional commencement date for the Amending Rules of 1 August 2027, which may be subject to change):

- AEMO will be required to publish the initial WEM Procedure setting out the requirements for an ECM and its proposed central forecasting methods and processes by 1 November 2027.
- The initial WEM Procedure will not commence until 1 January 2028, giving Market Participants an additional two months to prepare their ECMs.
- The new Standing Data requirements (which include the provision of ECMs for SSFs that are eligible for classification as CFFs) will also commence on 1 January 2028.
- AEMO's obligations to produce CFF Unconstrained Injection Forecasts and CFF Unconstrained Withdrawal Forecasts for CFFs will commence on 1 January 2028. However, AEMO will have until 1 June 2028 to classify the existing eligible SSFs as CFFs. This will give AEMO time to gradually include existing Facilities into its central forecasting systems over the five-month period.

Coordinator's Review

The Coordinator will be required to commence a review of intermittent generation forecasting in the WEM by 1 December 2029. This will allow for the collection of 12 months of data under the new arrangements.

The review, which must be conducted in consultation with AEMO, will consider:

- the performance of AEMO's central forecasting for CFFs against:
 - the previous forecasting performance of Market Participants for those Facilities;
 - the performance of Market Participants' forecasting for NSFs and non-CFF SSFs; and
 - the performance of central forecasters in other jurisdictions, including the National Electricity Market;
- the relative contributions of weather forecast uncertainty, Facility availability uncertainty and modelling errors and limitations to forecast inaccuracy over a range of forecasting horizons;
- whether central forecasting should be extended to include additional SSFs or NSFs;

- whether any changes should be made to the requirements for AEMO's periodic forecast accuracy reports;
- whether any other changes to the ESM Rules of WEM Procedures are required; and
- the scope and timing of any future intermittent generation forecasting reviews.

The review will include public consultation on a draft report and the publication of a final report.

2.3. Review Outcome 5: Publish operational forecasting metrics

Stakeholders were generally supportive of a requirement for AEMO to publish forecast accuracy metrics on a regular basis.

While no concerns were raised in submissions, AEMO has indicated in discussions with DEED that the generation of 'backcast' metrics on a regular basis would likely be high cost, due to the additional resources required to produce the backcasts and the complexity of the models involved.

The requirement for backcast metrics was proposed to help distinguish between the two main potential sources of forecast error, i.e. errors in the inputs to the model (e.g. inaccurate weather forecasts) versus errors in the construction of the model itself.

To avoid unnecessary cost, DEED has decided to not include a requirement for backcast metrics in the ESM Rules at this time.

For CFFs, AEMO's forecast accuracy reports will instead include measures of the forecast accuracy of the main weather inputs themselves (e.g. wind speed and solar irradiance levels). This will provide a less expensive comparison of weather input forecast accuracy against the corresponding CFF Unconstrained Injection Forecast accuracy.

AEMO will be required to publish a forecast accuracy report every quarter, consistent with the publication frequency of AEMO's Quarterly Energy Dynamics reports. While the basic requirements for the reports will be prescribed in the ESM Rules, AEMO will have the option to include additional analyses in the reports at its discretion.

Table 1 above summarises the forecast accuracy report requirements that will be specified in the ESM Rules, along with the rationale for their inclusion.

3. Appendices

Appendix A. Response to stakeholder submissions

The consultation period the [Operational Forecasting in the WEM Review: Consultation Paper](#) was from 24 July 2025 to 28 August 2025. DEED received submissions from AEMO, Alinta, APA, CME, Perth Energy, Synergy and Western Power. A summary of the issues raised in submissions and DEED's response to those issues is provided below.

Submitter	Issue Raised	DEED Response
General feedback		
Alinta	Alinta recommends that a more comprehensive approach and methodology be adopted—one that considers the broader aspects of the State Electricity Objective (SEO) potentially impacted by forecast errors—to assess their materiality. The current assessment methodology does not provide a sufficiently holistic view of efficiency within the broader context of the SEO. This narrow framing of efficiency risks is overlooking other factors and matters that may have a material impact on system reliability, investment, and environmental performance. Such other impacts might include the extent to which renewable energy was curtailed, outages recalled, or FCESS requirements were over forecast.	The approach taken to assess materiality of forecast errors was to identify their contribution to inefficiencies in the market and then to consider whether and to what extent inefficient outcomes could be avoided with improved forecasts. Prices were only one of the indicators used to identify potential inefficiencies. DEED does not consider that additional analyses of the impacts of forecast errors on renewable energy curtailment, outage recalls or FCESS requirements would have altered the proposals in the Consultation Paper and the review outcomes presented in this Information Paper.
Alinta	Alinta recommends that the Affected Dispatch Interval (ADI) provisions within the ESM Rules should be amended to explicitly exclude manifestly incorrect data arising from forecasting errors, as their inclusion introduces significant market uncertainty and undermines investment confidence. Applying it to forecasting inaccuracies, particularly those that are subjective or only evident in hindsight, risks	DEED understands that AEMO generally does not consider forecasting errors arising from the forecasting model input data that is not manifestly incorrect to be manifestly incorrect data. That is, 'normal' forecasting error will not, in practice, lead to ADIs.

Submitter	Issue Raised	DEED Response
	retroactively altering market prices in ways that penalise participants who were legitimately dispatched and compliant. Alternatively, the ADI framework should be updated to ensure that participants who are dispatched due to errors are reimbursed for their costs.	Forecasting error that arises due to manifest errors in the forecasting model inputs may lead to ADIs. DEED considers that AEMO should retain the flexibility to declare ADIs because of the forecasting model and the forecasting model input errors. While the declaration of ADIs because of forecasting model error without manifest errors in inputs is unlikely to lead to an ADI, unexpected circumstances (for example, a software bug) may have a substantial impact on market outcomes and justify the declaration of an ADI.
Perth Energy	One matter which Perth Energy considers should be included within the review is an assessment of what level of forecast accuracy can actually be expected. How predictable is the weather in the SWIS? Does this allow sufficiently useful forecasts to be prepared for short, medium or longer periods? There is no benefit in developing more comprehensive data collection and modelling systems if natural variability prevents better forecasts being made. Importantly, we need to ask whether critical weather events, that may cause a threat to the power system, can be predicted with any real degree of accuracy. Sudden storms, unexpected cloud cover and similar events can create major upsets in the system. These situations will become harder to manage as renewables provide a larger share of generation and storage meets a greater proportion of peak demand. If critical weather events cannot be forecast within a reasonable timeframe, the only option may be to adopt appropriate operating procedures and/or revised levels of reserve capacity.	DEED notes that some degree of operational forecasting error will be present in all forecasts all the time in the WEM. The refined Proposal 5 includes reporting of weather input forecast accuracy across different forecasting time horizons, which will provide some guidance as to the predictability of critical weather events. However, there is evidence to suggest that the weather forecasts currently used to generate FUOD and unconstrained intermittent generation forecasts are capable of material improvement. DEED's view is that continuous improvement of forecasting – both demand side and supply side – is crucial for meeting the SEO, especially as dispatchable generation is retired and intermittent generation and energy-limited storage takes its place, and the 'demand-side' becomes more flexible and responsive. Current market arrangements provide little incentive for continuous improvement in forecasting.

Submitter	Issue Raised	DEED Response
		Similarly, recognising the limitations on AEMO's ability to produce accurate forecasts is important, and appropriate operating procedures and market settings are also required to meet the SEO.
Distributed Energy Resources (DER)		
AEMO	As DER continues to scale in the SWIS and Virtual Power Plant (VPP) products and services become more prevalent in the WEM, it is increasingly important to understand DER behaviour. As VPPs scale and the use cases of DER evolve, AEMO will also need to gain greater visibility of VPP response to ensure it can contribute to power system security and reliability. AEMO will continue to work on this with EPWA, industry, and Project Partners as part of Project Jupiter.	DEED agrees that Project Jupiter should improve visibility of VPP response to improve DER forecasting.
Alinta	Alinta believes there may be a case to consider the inclusion of DER and price-responsive resources (e.g. VPPs, community batteries, and flexible loads) in the centralised demand forecasting models. As these resources increase in scale, they may materially influence system demand and operational decisions. Including these resources in centralised forecasting can improve accuracy and efficiency, especially during volatile or scarce conditions. A voluntary forecasting mechanism, like that used in the NEM, could enhance transparency without imposing compliance burdens, allowing operators to contribute meaningfully to operational forecasts. This supports efficient dispatch, reliability, and aligns with the SEO's goals for transparency and market efficiency. Early inclusion of these resources ensures forecasting reflects the full range of responsive assets.	Currently, DER is forecast as part of unscheduled base demand. Impacts of DER (including batteries and EVs) are implicitly included in forecasts: DER impacts actuals, and then forecasting algorithms are trained on actuals. DEED acknowledges that this approach may not be the best long-term solution, particularly for DER that can respond to wholesale price signals (as opposed to retail price signals). Proposal 5 is designed to identify forecasting errors arising from different sources, including DER, as early as possible via a comprehensive reporting mechanism. Project Jupiter will consider visibility and participation of DER in further detail. DEED considers that proposing changes in relation to specifics around forecasting of DER in this review would be premature considering this related work.

Submitter	Issue Raised	DEED Response
	We understand that Project Jupiter has similar aims to improve visibility of DER. This visibility should be leveraged not only to the benefit of the project participants, but to all Market Participants and to market efficiency.	
Proposal 1 - Reconsider Blending Parameters		
The following stakeholders indicated that they support or generally support Proposal 1. - AEMO - Alinta - APA - CME - Perth Energy - Synergy		
Proposal 2 - Investigate collaboration with weather providers		
The following stakeholders indicated that they support or generally support Proposal 2. - AEMO - Alinta - APA - CME - Perth Energy - Synergy		
Perth Energy	Perth Energy suggests that participants could be required to provide anemometer data at various heights and at sufficient locations to provide a valid picture of wind farm ambient conditions. Similar data for solar plants could also be provided.	Noted. As discussed in section 2.2 of this Information Paper, AEMO has advised that under refined Proposal 4 Market Participants will have no new requirements to provide weather-related SCADA values to AEMO. AEMO intends to continue to use the real-time Facility Net Available MW SCADA values provided by SSFs for primary Dispatch Interval forecasts, rather than seeking to determine these values itself from raw SCADA weather inputs from the Facility.

Submitter	Issue Raised	DEED Response
Synergy	Synergy supports the proposal but seeks to understand the role of Market Participants as it is not clear whether the proposal is for Market Participants to provide site-specific forecasts or data to assist AEMO. Market Participants need more information regarding the type, granularity and standard of data provided, frequency of data provision, whether this is "opt-in" or mandated and details regarding obligations, compliance and penalties.	The proposal is for AEMO to collaborate further with weather providers to improve the quality of forecast information. The related question to stakeholders regarding data provision was intended to ask whether participants consider that they have additional information not available to AEMO or weather providers that could be used in forecasting processes. This may include, for example, private weather stations in the vicinity of a wind farm or a load centre, or other meteorological or metering equipment used to augment internal forecasts. As discussed in section 2.2 of this Information Paper, the refined Proposal 4 will not impose any additional SCADA data requirements on Market Participants.
Western Power	Western Power seeks clarity about how the site weather data will be transferred to AEMO. Western Power considers that clear guidance around the preferred method should be provided to avoid duplication of infrastructure and pathways. If substantial additional site-level weather data is expected to be delivered via the Network Operator's systems, then consideration will need to be given to enabling technical infrastructure required such as capacity, bandwidth, polling rates, design, installation, commissioning and associated costs, and importantly, the governance around how these costs would be allocated and recovered.	DEED understands from a follow-up with Western Power that: • there is currently sufficient bandwidth to meet the expected data requirements for centralised intermittent generation forecasting (Proposal 4); and • additional weather sources, such as significantly more weather station sites, may require additional investment in the SCADA system. DEED notes that no significant additional weather or other sources have been put forward.
Proposal 3 - Enhance Documentation and processes		

Submitter Issue Raised		DEED Response
The following stakeholders indicated that they support or generally support Proposal 3. - AEMO - Alinta - APA - CME - Perth Energy - Synergy		
Alinta	Alinta supports the proposal and believes AEMO's operational forecasting processes should be aligned with the ST PASA to ensure a coherent and transparent approach to managing system reliability and market efficiency in the WEM. Integrating and publishing how the forecasting processes flow through all relevant market operation functions with clear articulation of their role across the WEM Procedures would enhance stakeholder understanding of how forecasts inform operational decisions and market signals.	AEMO's forecasting approach for different operational time frames (e.g., dispatch and pre-dispatch) is similar in inputs and methodology. Documentation is being developed including for the ST PASA forecasting process (Proposal 3).
Proposal 4 - Address the lack of incentive to produce accurate intermittent generation forecasts		
The following stakeholders indicated that they support or generally support Proposal 4. - AEMO - Alinta - Perth Energy		
AEMO	AEMO supports the proposal but acknowledges implementation of this proposal would require uplifts to systems, technology and processes which have costs for AEMO and Market Participants. AEMO considers it is crucial to implement this proposal as cost effectively as possible.	DEED acknowledges the cost concerns raised by stakeholders and has worked with AEMO since the consultation period to address these concerns. The refined Proposal 4, which is described in detail in section 2.2, reduces implementation costs for both Market Participants and AEMO, while supporting the introduction of central forecasting for most of the capacity of the intermittent fleet and providing a pathway for future expansion of the arrangements if warranted.

Submitter	Issue Raised	DEED Response
APA	Whiles APA acknowledges the concern that intermittent generator forecasts submitted on a “reasonable endeavours” basis present enforcement challenges, it is concerned that the implementation costs associated with a wholesale conversion to a centralised forecasting regime may outweigh the benefits. Specifically, requiring existing facilities to convert may introduce unnecessary and unaccounted for costs without delivering meaningful improvements, particularly where those facilities already provide accurate forecasts. Accordingly, APA does not support mandatory participation in a centralised forecasting regime for intermittent generation. A more appropriate approach would be to implement this on an opt-in basis, or only in cases where an intermittent generation facility has demonstrably and consistently provided materially inaccurate forecasts over the long term.	Please refer to section 2.2 of this Information Paper. DEED considers that an opt-in approach does not address the issue this Proposal is designed to address. - Participants self-forecasting may have incentives to game the forecasts and by not opting in, participants retain these incentives. - A forecaster should be incentivised to continuously improve forecasting practices. Determining whether forecasts are ‘consistently and materially inaccurate’ does not incentivise improvement. The forecaster should not be trying to maintain performance above a minimum, it should constantly be trying to outperform previous maximums.
APA	Providing the necessary data will likely require SCADA upgrades and increased telemetry. There is uncertainty regarding the capacity of the Western Power SCADA network to accommodate the additional bandwidth demands. These technical constraints should be assessed and addressed collaboratively to ensure feasibility, and any associated costs should be carefully weighed against the expected benefits.	As outlined in section 2.2 of this Information Paper, there will be no additional SCADA requirements beyond what is already required for SSFs with wind or solar generating units. AEMO will continue to use the real-time Facility Net Available MW SCADA values provided by SSFs for the primary Dispatch Interval forecasts, rather than seeking to determine these values itself from raw SCADA inputs.
APA	APA proposes that AEMO’s implementation costs, including common network upgrades undertaken by Western Power, be shared across the market in recognition that any net benefits, once established, would be distributed proportionally. However, participant-specific costs, such as system and hardware upgrades including direct	DEED agrees that AEMO’s implementation costs should be shared across the market via Market Fees. As noted above, DEED considers that an opt-in approach does not address the issue this Proposal is designed to address.

Submitter	Issue Raised	DEED Response
	SCADA interfaces, should be borne by the participant only upon opting into the centralised forecasting regime.	
CME	CME has concerns regarding the potentially substantial implementation costs for Proposal 4, particularly in light of the unquantifiable benefits. CME would prefer additional scrutiny to ensure the costs will exceed the benefits before this Proposal is implemented. One option is to implement Proposals 1, 2, 3, 5 and 6 and then consider the value of implementing Proposal 4. In the context of rising energy costs in the SWIS it is imperative that all efforts are made to reduce costs.	The analysis presented in the Consultation Paper indicates that intermittent generation forecast inaccuracy is already a significant cause of market inefficiency. The potential benefits of more accurate forecasts will continue to grow as the level of intermittent generation in the SWIS increases. The current arrangements provide little incentive to improve intermittent generation forecast accuracy. DEED has concluded that assigning responsibility for intermittent generation forecasting to AEMO is the best available option to improve forecast accuracy, for the reasons set out in the Consultation Paper. However, DEED acknowledges the cost concerns raised by stakeholders and has worked with AEMO since the consultation period to address these concerns. The refined Proposal 4, which is described in detail in section 2.2, reduces implementation costs for both Market Participants and AEMO, while supporting the introduction of central forecasting for most of the capacity of the intermittent fleet and providing a pathway for future expansion of the arrangements if warranted. DEED notes that implementing Proposals 1, 2, 3, 5 and 6 is not expected to improve the accuracy of intermittent generation forecasts

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CME	If the proposal is implemented, CME agrees that there should be separate visibility of co-located IGR and ESR facility output and forecasts.	Under the revised Proposal 4, SSFs that contain Electric Storage Resources will not be classified as CFFs and subject to central forecasting.
Perth Energy	Perth Energy considers that forecasting would be more consistent and efficient if this is undertaken primarily by AEMO. This would avoid potential issues with different participants utilising different modelling approaches and avoid the need to incentivise participants to provide good forecasts.	Noted. DEED also considers that issues around the current forecasting arrangements are likely to worsen over time as the penetration of intermittent and energy-constrained generation and storage increases.
Perth Energy	Where a significant amount of renewable generation facilities is being built in the same general location, forecasting the outcome of the local fleet, rather than individual facilities, is probably more useful.	While local fleet forecasts may be useful, WEMDE requires individual unconstrained intermittent Injection and Withdrawal forecasts for each Facility.
Synergy	Synergy considers that this proposal is premature at this stage of the Forecasting Review. Should the other proposals in the Consultation Paper be implemented, AEMO and Market Participants must be afforded time to observe and assess if the changes have improved the quality of operational forecasting in the WEM before having to consider if a centralised forecasting approach would achieve the same objective of improved forecasting quality.	The other proposals in the Consultation Paper address some shortcomings of the current arrangements but not all shortcomings. For example, incentives for continuous improvement and potential for gaming of forecasts are not addressed by other proposals.
Synergy	Additionally, a proposal for change from a partial to fully centralised forecasting approach should be accompanied by a cost-benefit analysis to enable educated consideration of the proposed change. In undertaking a cost-benefit analysis, consideration should also be given to any potential alternative approaches that may be appropriate for the WEM.	The analysis presented in the Consultation Paper indicates that intermittent generation forecast inaccuracy is already a significant cause of market inefficiency. The potential benefits of more accurate forecasts will continue to grow as the level of intermittent generation in the SWIS increases. The current arrangements provide little incentive to improve intermittent generation forecast accuracy. DEED has concluded that

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		assigning responsibility for intermittent generation forecasting to AEMO is the best available option to improve forecast accuracy, for the reasons set out in the Consultation Paper. However, DEED acknowledges the cost concerns raised by stakeholders and has worked with AEMO since the consultation period to address these concerns. The refined Proposal 4, which is described in detail in section 2.2, reduces implementation costs for both Market Participants and AEMO, while supporting the introduction of central forecasting for most of the capacity of the intermittent fleet and providing a pathway for future expansion of the arrangements if warranted.
Proposal 5 - Publish operational forecasting metrics		
The following stakeholders indicated that they support or generally support Proposal 5. • AEMO • Alinta • APA • CME • Perth Energy • Synergy		
CME	CME supports the proposal as it improves transparency and recommends that AEMO be required to publish how the forecasting errors compare across its models to identify changes in model performance and improve forecasting.	DEED agrees.