


TWG6: Visibility session 2

Integrating Price-Responsive Resources into the NEM
rule change

7 May 2024

AEMC

ACKNOWLEDGEMENT OF COUNTRY



The AEMC acknowledges and shows respect for the traditional custodians of the many different lands across Australia on which we all live and work. We pay respect to all Elders past and present and the continuing connection of Aboriginal and Torres Strait Islander peoples to Country. The AEMC office is located on the land traditionally owned by the Gadigal people of the Eora nation.

Agenda

1	Introductions and competition protocols	2.00 pm – 2.15 pm	(15 min)
2	Recap on previous TWG engagement on visibility	2.15 pm – 2.25 pm	(10 min)
3	Stakeholder engagement and new direction	2.25 pm – 3.25 pm	(55 min)
4	Break	3.25 pm – 3.30 pm	(5 min)
5	We are now considering immediate and proportionate response to the visibility problem	3.30 pm – 4.15 pm	(45 min)
6	Wrap up	4.45 pm – 5.00 pm	(15 min)

TWG purpose and materials disclaimer



We have established this TWG to gain industry insight and feedback to evolve our policy thinking throughout the rule change

Please note that the information in this pack is the *Integrating price-responsive resources into the NEM* project team's initial views. We have included our initial views in places to assist with discussions.

The views expressed by the team in TWG documents or meetings do not necessarily represent the views of the Commission or what will be included in our upcoming Draft Determination.



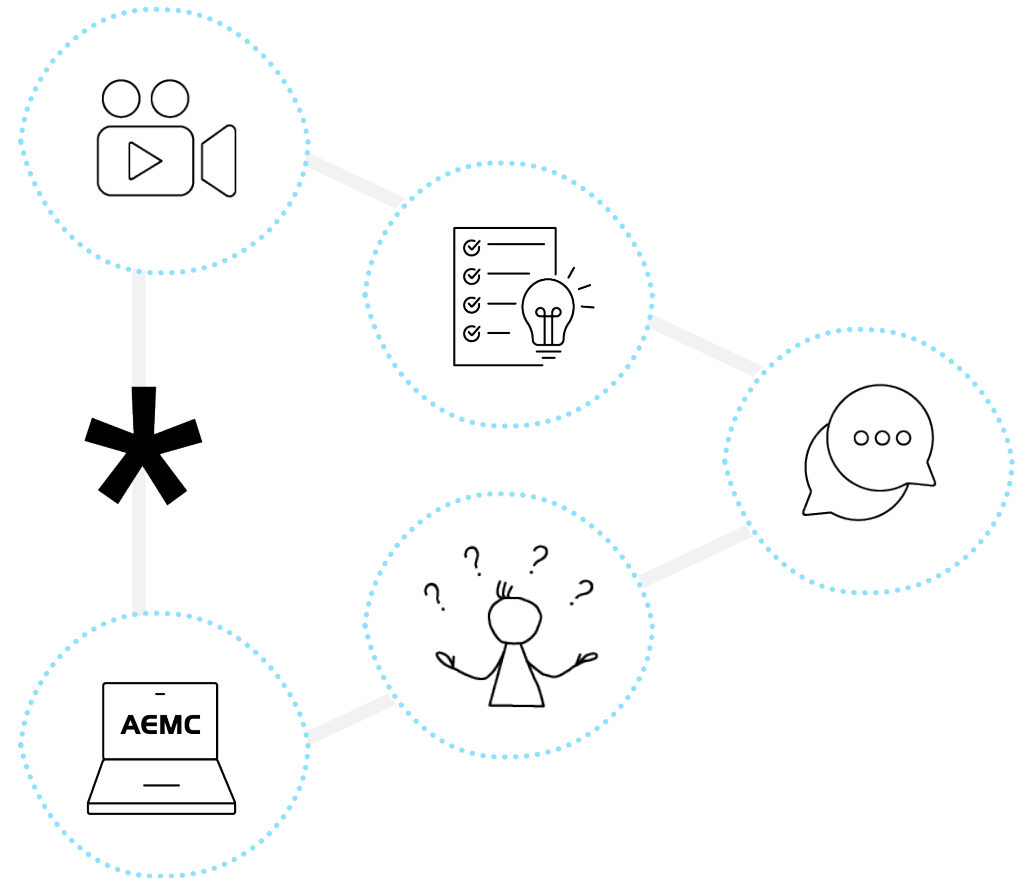
CONSENT TO USE OF PERSONAL INFORMATION



By participating in this workshop, **you give your consent** to our collection, use and disclosure of the personal information you provide to us during this workshop (like your name) for the purpose of completing our consultation and publishing our draft and final determinations and reports on this rule change or review.

Please read our [privacy policy](#) for more information.

We aren't recording this workshop. We will be conducting it under Chatham house rules. We will be publishing summary minutes and the slides in this session.



COMPETITION PROTOCOL

KEY PRINCIPLES



The AEMC is committed to complying with all applicable laws, including the ***Competition and Consumer Act 2010*** (CCA), during this forum. Breaching the CCA can lead to serious penalties for individuals involved in any breach (including large financial penalties and imprisonment for key individuals involved). This protocol governs the way in which discussions will proceed at this forum, and each attendee agrees to adhere to this protocol in order to comply with the CCA.

Each attendee must make an independent and unilateral decision about their commercial positions and approach in relation to the matters under discussion in this forum.

Attendees must not discuss, or reach or give effect to any agreement or understanding which relates to:

- **pricing** for the products and/or services that any attendee supplies or will supply, or the terms on which those products and/or services will be supplied (including discounts, rebates, price methodologies etc)
- **targeting (or not targeting) customers** of a particular kind, or in particular areas
- **tender processes** and whether (or how) they will participate
- any decision by attendees:
 - about the purchase or supply of any products or services that other attendees also buy or sell
 - to not engage with persons or the terms upon which they will engage with such persons (i.e. boycotting); or
 - to deny any person's access to any products, services or inputs they require
- **sharing competitively sensitive information** such as non-publicly available pricing or strategic information including details of customers, suppliers (or the terms on which they do business), volumes, future capacity etc
- **breaching confidentiality obligations** that each attendee owes to third parties.

COMPETITION PROTOCOL

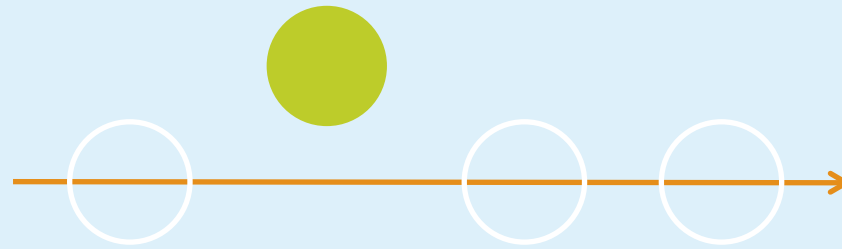
COMMUNICATION AND MEETING GUIDELINES



Attendees must ensure that all communications (including emails and verbal discussions) adhere to the ***Key Principles***.

This forum will be conducted in accordance with the following rules:

- The agenda for this forum does not include anything that could contravene the Key Principles set out in this protocol.
- We will read and minute the below *competition health warning*:
 - Attendees at this forum must not enter into any discussion, activity or conduct that may infringe, on their part or on the part of other attendees, any applicable competition laws. For example, attendees must not discuss, communicate or exchange any commercially sensitive information, including information relating to prices, marketing and advertising strategy, costs and revenues, terms and conditions with third parties, terms of supply or access.
 - Participating in this forum is subject to you having read and understood the protocol including the Key Principles.
- We will keep accurate minutes of the forum, including details of attendees.
- If something comes up during the forum that could risk contravening any competition laws, attendees should:
 - Object immediately and ask for the discussion to be stopped.
 - Ensure the minutes record that the discussion was objected to and stopped.
 - Raise concerns about anything that occurred in the forum with their respective legal counsel immediately afterwards.
- All attendees understand that any competitively sensitive matters must be subject to legal review before any commitment/agreement can be given.
- Any decision about whether, and on what terms, to engage with customers and suppliers is an independent and unilateral decision of each attendee.

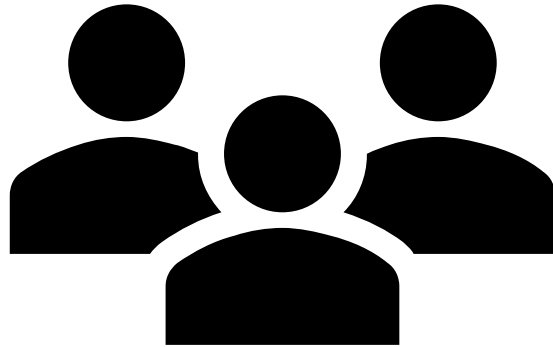


Introduction



AEMC

AEMC project team



EGM: Andrew Lewis

Project sponsor: Ben Davis

Project leader: Rachel Thomas

Lead areas

Visibility lead: Sam Markham

Dispatch lead: Harrison Gibbs

Incentives lead: Rachel Thomas

Additional

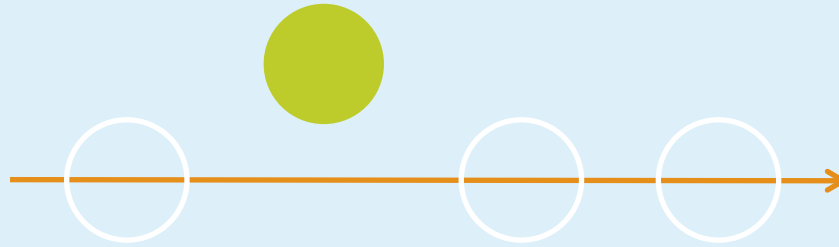
Lawyers: Lily Mitchell and Ben Bronneberg

Market expert: Craig Oakeshott

Graduate: Jacqueline Price

TWG timeline

Meeting time	Indicative issue areas for discussion
Wednesday 21 February 3 – 5pm	TWG1 Introduction to the TWG
Tuesday 27 February 10.30am – 1pm	TWG2: Visibility #1 Visibility option(s) to continue to draft determination
Monday 4 March 2 – 5pm	TWG3: Dispatch #1 The overarching framework for the rule and participation
Tuesday 12 March 10am – 1pm	TWG4: Incentives Incentives for solutions will be discussed
Wednesday 10 April 2 – 5pm	TWG5: Visibility #2 (cancelled) Contd. Discussion from 27 Feb
Tuesday 16 April 2 – 5pm	TWG6: Dispatch #2 Contd. Discussion from 4 March
Tuesday 7 May 2 – 5 pm	TWG7: Visibility #2 and wrap up Contd. Discussion from 27 February



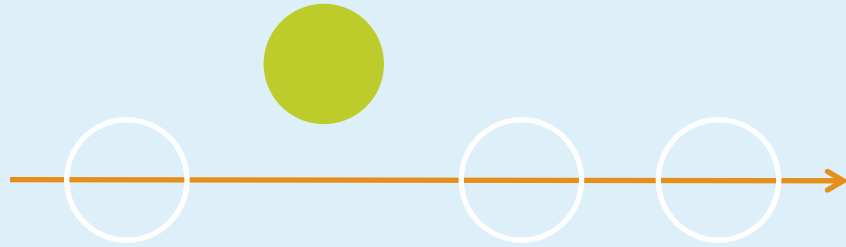
Recap on previous TWG engagement of visibility

Refresher on 27 February visibility TWG

- At the February TWG on visibility:
 - AEMO outlined how it undertakes forecasting and how its proposed visibility mode as set out in the rule change (*AEMO visibility model*) would feed into their current processes
 - Dave Smith from creative energy consulting outlined the alternative visibility model (*Dave visibility model*)
 - We sought feedback from TWG members on:
 - the types of resources that would be capable of participating in a visibility model
 - what would the participation requirements would be in the Dave visibility model
- The TWG discussion focused on the following themes:
 - AEMO's current use of price-responsive information to inform forecasting
 - If incremental changes such as improvements to AEMO forecasting should be explored in lieu of a significant market reform
 - The firmness and clarity of what resources can respond to price and which ones do not
 - The strengths and weaknesses of the Dave visibility model
 - If it is warranted to introduce the Dave visibility model yet
 - AEMO's ability to do retailer-level forecasting required for the Dave visibility model.

Refresher on April TWG

- In April, we informed the TWG that our direction was to:
 - Stop work on the AEMO visibility model as a stand-alone mechanism to address the visibility problem statement. We stopped work on this for the following reasons:
 - It has high barriers to entry as it requires NMI to be registered within an LSU. Because of the real-time metering and telemetry requirements, this would limit the resources that can participate.
 - Not incorporating indicative bids into dispatch will mean that the IES 'size of the prize' modelled benefits of improved dispatch outcomes or reduced FCAS costs would not occur.
 - Continue work on the Dave visibility model. However, we noted the potential challenges and complexity with the model.



Stakeholder engagement and new direction

Our analysis on the Dave visibility model in April

Our discussions with AEMO and participants have revealed that the Dave visibility model is likely feasible to implement. However, it would come with significant complexity and cost, particularly in regard to retailer-level forecasting, which may not be warranted yet.

- Informed by discussions with AEMO, we consider that there are not significant technical or feasibility issues with the Dave visibility model with:
 - incorporating the quasi-bids into dispatch
 - adjusting the FPP mechanism for FRMPs based on their contribution to correcting forecast errors.
- However, we consider there are some practical high-cost issues associated with retailer-level demand forecasting. While the 'Dave' model does not propose changes to AEMO's dispatch process, it requires retailer-level forecasting to determine a counterfactual and the FPP allocations. Therefore, retailer-level forecasting that closely reflects dispatch forecasting would be most beneficial to incentivise participation and accurate quasi bids.
 - **It would substantially increase AEMO's forecasting responsibilities.** We understand that AEMO would have to prepare forecasts for every retailer (currently around 68) in the NEM regardless of participation in the 'Dave' model. Currently, AEMO prepares 8 regional/sub-regional pre-dispatch forecasts and 5 regional dispatch forecasts and considers around 9 industrial loads separately.
 - **Dispatch forecasting would be more costly and challenging than pre-dispatch.** We understand that AEMO custom builds each dispatch forecasting model with variables for each region and major industrial loads. Each model is trained weekly using 4 years of data. This would amount to a significant increase in AEMO's role if it was to prepare dispatch forecasting for each retailer.
- We have received clear and repeated feedback from TWG members that it's not warranted to introduce the 'Dave' model yet.
- TWG members considered some price-responsiveness that could cause forecast errors and frequency performance payments (FPP) allocations are not known in real-time and/or not sufficiently able to be estimated. Examples raised included spot-price pass-through contracts and customer incentive schemes. These business models have less predictable response and may not directly align with actual spot prices.

Our analysis on alternative options to address the visibility problem statement

TWG continued to raise concerns with implementing a large regulatory solution without evidence that AEMO had tried and not succeeded to improve its forecasting. We consider this is worth testing.

- TWG members considered incremental changes such as improvements to AEMO forecasting should be explored in lieu of a significant market reform particularly since the 'visibility' problem has not yet materialised.
- In bilateral meetings, participants raised that AEMO collects information in the demand side participation (DSP) information portal and is not transparent about how this information is used or the limitations preventing it from using that information in forecasting. They considered that it was not clear that AEMO has used all tools available and failed.
- We understand that improvements to forecasting to account for demand-side price responsiveness may sufficiently reduce the forecast errors and dispatch inefficiencies associated with the 'visibility' component of demand side price-responsiveness. If successful, this would remove the need for a regulatory solution.
- After testing this internally with other AEMC teams, we consider improvements to AEMO forecasting of this nature would be feasible in principle.

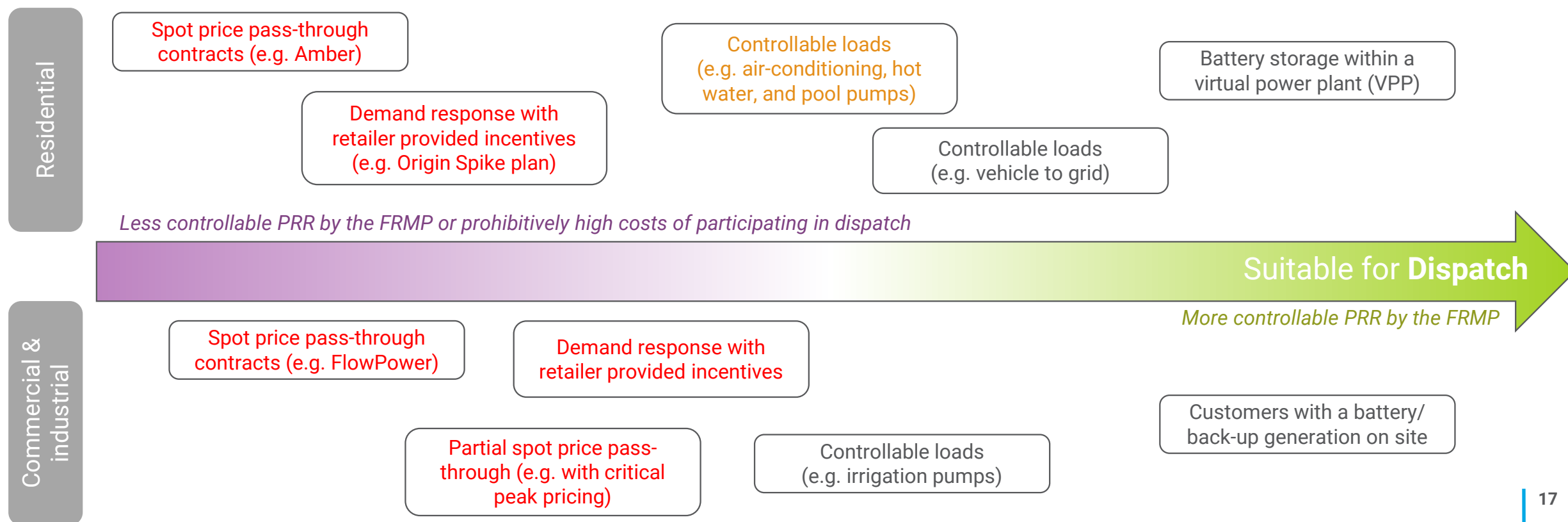
The visibility problem statement remains

Key: PRR **not capable of** or **unlikely to be cost-effective to** participate in dispatch mode

The problem statement for a visibility model remains. We need to account for price-responsive business models that are not capable of, or cost-effective to, participate in dispatch mode.

Stakeholder feedback in submissions, TWG and further stakeholder discussions identified a range of business models (enabled by a range of resources) that may be suitable to participate in the visibility or dispatch IPRR designs. This is summarised in the figure below.

There is a large range of resources capable of responding to price – batteries, shifting or reducing load, EV charging, etc. However, the nature of the response and how controllable it is depends on the type of product or service a customer chooses (e.g. a battery in a VPP would be capable of participating in dispatch, but a battery for a customer on an Amber plan would not be).

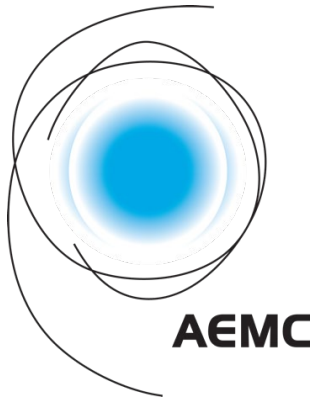


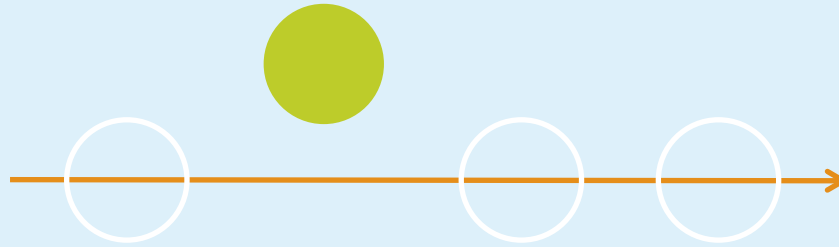
Current staff position following feedback and further work

- Price-responsive resources that are not able of, or cost-effective to, participate in dispatch, is likely to substantially increase in the future. If not appropriately accounted for in dispatch this will cause inefficient market outcomes – inefficient spot prices, dispatch and FCAS enablement from over-dispatch, and RERT use when its not needed (visibility problem statement on slide 17).
- The mechanisms we have considered for FRMPs to share information with AEMO directly through formal market mechanisms have high cost and complexity which, following further work, may outweigh the potential low benefits in early years.
- We consider there's room for AEMO to potentially consider these types of resources in demand forecasting. Also, given the problem hasn't materialised yet, we are seeking to explore lower cost options to see if they are capable of sufficiently reducing the inefficient outcomes we expect to see.
- We consider the following approach is pragmatic and best-placed for where we are at in the uptake of PRR:
 - A reporting framework to assess the size and impact of the problem. This would involve reporting by both AEMO and the AER.
 - Improved transparency on how AEMO considers PRR in its operational forecasting and, should a problem materialise, what it is doing to improve forecasting.
 - A review by the AEMC four-five years after monitoring has commenced to consider the issues raised in reporting and whether a market-based solution (such as the Dave visibility model) is appropriate.

Do you have any feedback on the team's approach and the conclusions we have drawn?

Break





**We are now considering
immediate and proportionate
response to the visibility
problem**

We are now considering an incremental approach given the current nature of the problem

- Before the break we set out our current approach to managing the 'visibility' problem.
- We consider the following approach is pragmatic and best-placed for where we are at in the uptake of PRR:
 - A reporting framework to assess the size and impact of the problem. This would involve reporting by both AEMO and the AER.
 - Improved transparency on how AEMO considers PRR in its operational forecasting and, should a problem materialise, what it is doing to improve forecasting.
 - A review by the AEMC four-five years after monitoring has commenced to consider the issues raised in reporting and whether a market-based solution (such as the Dave visibility model) is appropriate.

The following slides set out how we're thinking about each aspect of this framework. We seek TWG feedback throughout in **green**.

Reporting framework to identify and measure the visibility problem

Why are we considering a monitoring and reporting framework?

Objective:

- To assess the impact of PRR on demand forecasting errors and its contribution to inefficient outcomes in operational timeframes.
- Identify if/when the visibility problem becomes material and AEMO improvements to forecasting are needed, or if a regulatory solution is needed.
- In considering whether the problem is material, AEMO and the AER would consider the types of inefficient outcomes identified in our earlier modelling on the size of the prize with IES. This revealed that demand forecasting errors cause a series of inefficient outcomes including inefficient prices and inefficient quantities dispatched, which has high costs and greater FCAS requirements, and inefficiently high emissions.

Expected benefits:

- Increased transparency of the contribution of demand-side price-responsiveness to demand forecast errors and subsequent inefficient market outcomes.
- We consider this could be used:
 - By AEMO to improve its forecasting. *This is set out in a separate requirement later in this session.*
 - By the AER to make recommendations based on the findings.

1. Do you have feedback on the objective of the reporting framework?

How we consider it could work

Who: We consider both the AER and AEMO have a role to play. *This is set out in more detail on the next slide.*

- For AEMO, publishing forecast errors to assess efficiency. This would be a new reporting focus but drawing on data to which AEMO already has access.
- For the AER, the reporting requirement would build on its reporting obligations in the NEL which focus on competition and market efficiency.

2. Do you have feedback on this high-level approach for AEMO and the AER to both have a reporting function?

Frequency: at least annually

Information gathering:

- Could require some additional regulatory burden on market participants like the ES00 reporting requirements
- AER may need access to additional information from AEMO to fulfill this function.

3. Do you have feedback on the frequency of reporting or information gathering?

Reporting framework to identify and measure the visibility problem

Who would report on what? How is it different to the current arrangements?

We are focused on minimising duplication while giving each agency the most appropriate and relevant reporting role/s. AEMO is well-placed to identify the materiality of, and reasons for, forecast errors and in turn the materiality of accounting for demand-side price-responsiveness in its dispatch forecasts. However, the AER is well-placed to consider the impacts of forecast errors for market efficiency.

Market body	Current arrangements	New reporting requirements
AEMO	Our analysis indicates that there is currently no requirement in the rules for AEMO to report on the level or causes of operational timeframe demand forecast errors. AEMO has a range of reporting functions already (set out in <i>appendix 1</i>) but these reporting frameworks are focused on the impact of errors on reliability. That is, AEMO appears to have no obligations to report on forecast errors as a standalone issue.	We would seek to create a new reporting requirement for AEMO on the materiality and impact of demand-side price-responsiveness on demand forecast errors and broader market outcomes.
AER	Currently, the AER has a principles-based reporting framework in the NEL and NER (set out in <i>appendix 2</i>) to consider market efficiency, significant price events in energy and FCAS markets, and broader FCAS market outcomes.	We would seek to create a new reporting requirement for the AER to periodically consider the role of demand side price-responsiveness on efficiency in the market. This requirement would build on the role for the AER to monitor and report on market efficiency set out in the NEL.

4. Do TWG members have feedback on this approach? Specifically:

- Do you consider there needs to be a reporting role for both AEMO and the AER?
- Do you consider the approach for each market body is appropriate? Why or why not?
- Do you have feedback on the regularity of reporting?
- Do you have feedback on metrics that would be useful or interesting for market participants? *Explored on next slide*

Possible metrics for AEMO and the AER

There's a broad range of possible metrics that could be considered. These are the ones that we have considered may be useful:

- Summary statistics of the uptake of demand-side price responsiveness
- Contribution of price-responsiveness to:
 - the magnitude of AEMO's dispatch demand forecast errors
 - the magnitude of AEMO's pre-dispatch demand forecast errors
- Magnitude of FPP
- The issues considered in the IES 'size of the prize' modelling. This includes the costs associated with the above demand forecast errors for:
 - FCAS enablement
 - RERT use
 - Avoidable generation costs
 - Avoidable emissions
 - Inefficiently high/low spot prices

5. Do you have feedback on the above metrics?

6. Do you have feedback on which market body would be best-placed to report on this?

Reporting framework to show whether and how the problem can be addressed by improvements to AEMO forecasting

Why are we considering extra reporting requirements for AEMO if/when a problem materialises?

Objective:

- Increase transparency on the actions AEMO is taking to account for demand-side price-responsiveness to reduce forecast errors and market inefficiencies.
- This would not preclude AEMO from making changes to its demand forecast overtime .

7. Do you have feedback on the objective of this extra reporting framework?

Expected benefits:

- It would require AEMO to transparently identify and seek to remedy issues with its demand forecasting.
- It would provide the AEMC in a future review with more information to consider the inputs that AEMO has used in demand forecasting (such as the DSPIP), before changing or increasing the regulatory burden on industry.
- It would give market participants a greater understanding of AEMO's operational forecasting. This would provide participants with valuable insights on the specific errors in AEMO forecasting should the Dave model be introduced. Furthermore, it would give participants insight into the type of quasi-bids that would improve forecasting and lower FPP.

8. Do you have feedback on the expected benefits?

How we consider it could work

- AEMO to publish the actions it takes to improve demand forecasting to account for demand side price-responsiveness if/when it becomes material.
- As part of this requirement, we anticipate that AEMO would also publish its methods and assumptions for how it considers demand-side price-responsiveness in its forecasting.
- AEMO is already required to publish how it considers demand side participation (DSP) information in forecasts but that this is only used in longer term forecasting.

9. Do you have feedback on this high-level approach for AEMO to report on the above issues?

10. Would this be useful for market participants to understand how AEMO forecasts incorporate price-responsiveness and how these are updated over time?

Frequency: once materiality threshold is met

Determining the materiality threshold: TBC

11. Do you have views on whether the materiality threshold should be specified in the rules, by AEMO in guidelines, somewhere else?

Review framework to consider a proportionate policy response if/when the visibility problem materialises

Why are we considering a review by the AEMC in several years' time?

Objective:

- Delay the consideration of a significant market reform to when the AEMC has more information, and the problem has potentially started to materialise.
- Should the visibility issue materialise, this will enable lower cost methods, such as improvements to AEMO's forecasting, to be tested in the first instance.
- We anticipate this could be 4-5 years post-implementation of the reporting frameworks.

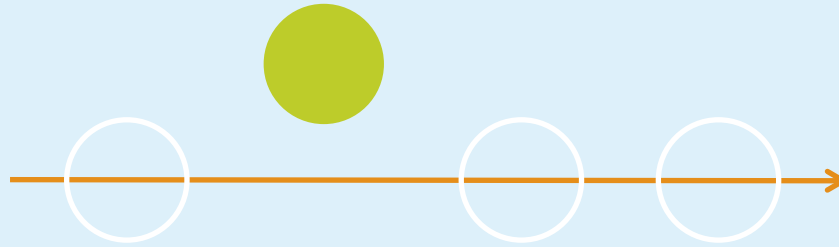
12. Do you have feedback on the objective for the AEMC review to be considered in several years' time?

How we consider it could work

Scope of the AEMC review specific to visibility issues

- In the review, the AEMC would consider the materiality of demand side price-responsiveness on efficient market outcomes, and if material, options to address the issue.
- Specifically, issues for consideration could include:
 - the uptake of demand-side price-responsiveness and the materiality of its impact on dispatch inefficiencies
 - emerging business models that may be suited to participate in dispatch mode, the 'Dave' model or AEMO forecasting
 - outcomes from AEMO and the AER reporting
 - issues with the ability for AEMO to account for demand-side price-responsiveness in forecasting through the transparency requirements.
 - the extent to which any changes AEMO has or intends to introduce are or are likely to be effective in resolving the visibility problem
 - the suitability of introducing a 'Dave' model to address issues identified in reporting if relevant. AEMO to publish the actions it takes to improve demand forecasting to account for demand side price-responsiveness if/when it becomes material.

13. Do you have feedback on the potential issues the AEMC could consider in this review?



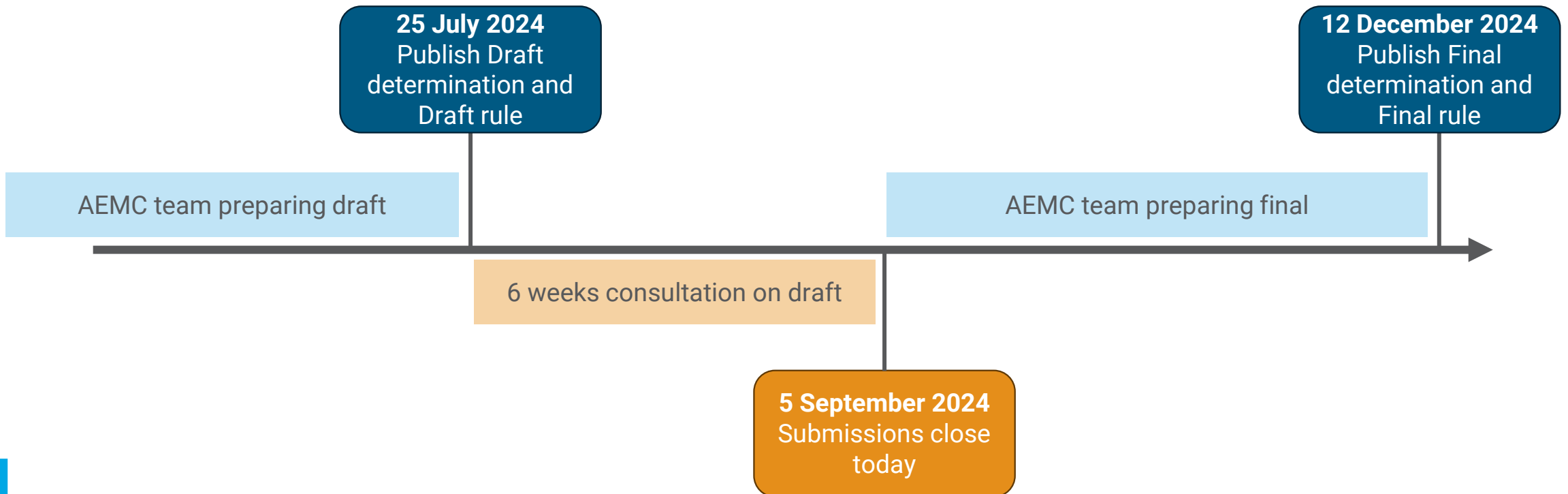
Wrap up



AEMC

Where to from here?

This marks the end of our TWG sessions. The following timeline sets out the rest of the rule change and formal opportunities for engagement.



Further information

Project page

For more information and links to any documents mentioned:

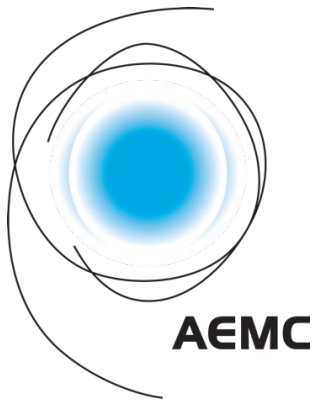
<https://www.aemc.gov.au/rule-changes/integrating-price-responsive-resources-nem>



Contact

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Appendix: supplementary content



Appendix 1: Explanation of AEMO's current reporting requirements

This table sets out the AEMC team's current understanding of the totality of AEMO's reporting requirements with respect to forecast accuracy and whether/how it accounts for demand-side price-responsiveness. The below reporting requirements focus on reliability and the extent to which forecast errors have contributed to AEMO's planning (ESOO) or operations (such as declaring a lack of reserve condition).

Requirement		Analysis of the relevance to the IPRR rule change
Demand side participation information <i>NER cl 3.7D</i>	<p>Under rule 3.7D(b), <i>Registered Participants</i> must provide demand side participation information to AEMO.</p> <p>AEMO must publish no less than annually:</p> <ul style="list-style-type: none"> analysis of volumes and types of demand response (rule 3.7D(c)). details on the extent to which, in general terms, demand side participation information received under rule 3.7D has informed AEMO's development or use of load forecasts (as set out in clause 4.9.1) for the purposes of the exercise of its functions (rule 3.7D(d)). <p>AEMO must include demand side participation information in the <u>DER register</u>, as well as DER generation information (rule 3.7E(b)) and must also report annually on the extent to which DER register information has informed AEMO's development or use of load forecasts (rule 3.7E(f)).</p>	<ul style="list-style-type: none"> The DSP forecast methodology (published December 2023) describes how AEMO's forecasting process incorporates DSP information. In the methodology, AEMO shows how the aggregated profiles are built using the DSPIP and half-hourly profiles by NMI. This is then used to calculate baselines for each lack of reserve (LOR) trigger.
Electricity Statement of Opportunities (ESOO) <i>NER cl 3.11.3A</i>	<p>The NER sets out requirements for AEMO to report on accuracy of demand and supply forecasts as determined by AEMO to be material to reliability forecasts. AEMO must also publish any improvements made by AEMO or other relevant parties to the forecasting process that will apply to the next ES00. AEMO must publish these reviews for the ES00 no less than annually, under cl 3.13.3A(h).</p> <p>The NER also requires AEMO to publish operational assumptions made by AEMO in relation to contracted demand side participation under cl 3.13.A(a)(h).</p>	<ul style="list-style-type: none"> This reporting framework is useful as it tests the contribution of DSP information to the accuracy of forecasts in the ES00. Timeframe of consideration is 1 year ahead (i.e. 2022 ES00, assess the 2023 year, publish report in 2024). The focus remains on reliability and takes a longer-term rather than operational view. We consider the reporting requirement (under cl 3.13.3A(h)) is unlikely to be suitable for modifying in the IPRR rule change. The focus of this reporting requirement is on reliability and accuracy of forecasts in the context of variables AEMO considers material to reliability which is the focus of the ES00. Whereas we are more interested in short term demand forecast errors and whether/how demand-side price-responsiveness has contributed to these errors.
Reserve level declaration guidelines <i>NER cl 4.8.4A</i>	<p>AEMO must publish reserve level declaration guidelines that set out how AEMO will determine a lack of reserve condition. The guidelines must:</p> <ul style="list-style-type: none"> describe how AEMO continually assesses the probability of <i>capacity reserves</i> being insufficient to avoid <i>load shedding</i> (other than the reduction or <i>disconnection of interruptible load</i>) given reasonably foreseeable conditions and events describe how the probability assessment (described above) applies in relation to different periods of time. 	<ul style="list-style-type: none"> AEMO produces the FUM which is used in determining low reserve and lack of reserve (LOR) trigger levels. The confidence level used in determining FUM is to be set at a level that AEMO reasonably expects to achieve an appropriate balance between reducing the chance of a situation where LOR Load Shedding arises due to lack of action by AEMO as a result of reserve forecasting error; and increasing the likelihood of unnecessary declarations due to an overly conservative confidence level. Our initial view is that AEMO could use this information/systems as part of the reporting requirement to reduce the costs of implementation and monitoring. We have sought feedback from the AEMO team on this.

Appendix 2: Explanation of the AER's current relevant reporting requirements

	Requirement	Analysis of the relevance to the IPRR rule change
AER wholesale market monitoring and reporting functions <i>NEL s 18C</i>	<p>This provision sets out the AER's market monitoring functions. It requires the AER to monitor and review on a regular and systematic basis the performance of monitored markets. Specifically:</p> <ul style="list-style-type: none"> At least every 2 years, the AER must identify and analyse whether, in relation to a particular wholesale electricity market: <ul style="list-style-type: none"> there is effective competition within the market; and there are features of the market that may be detrimental to effective competition within the market; and there are features of the market that may be impacting detrimentally on the efficient functioning of the market (and, if so, to assess the extent of the inefficiency); The AER must perform other monitoring or analysing functions that relate to offers and prices (including forecast prices, actual prices and bidding) within any wholesale electricity market conferred on the AER by the Rules. 	<ul style="list-style-type: none"> We consider the AEMC could create a new rules requirement for the AER to consider the impact of demand-side price responsiveness on market efficiency, as part of its market monitoring functions under the NEL. Amendments to this section of the NEL were passed in 2023 to improve the AER's wholesale market monitoring powers. These changes are due to come into effect this year and are intended to improve the AER's ability to gather and use information.
AER reporting on market ancillary services markets <i>NER cl 3.11.2A</i>	<p>Introduced in 2019, this provision requires the AER to publish a report within 30 business days of the end of each calendar quarter. The report must contain:</p> <ul style="list-style-type: none"> information in relation to each market ancillary service listed in clause 3.11.2(a) for the quarter: <ul style="list-style-type: none"> total costs paid to Ancillary Service Providers for each region; total quantity of the market ancillary service that was dispatched by AEMO in each region; the lowest, highest and average price for each region for the market ancillary service; and the number and types of Ancillary Service Providers; the AER's analysis of key trends and outcomes in the markets for market ancillary services during the quarter; and any other relevant information the AER considers necessary or convenient to include in the report. 	<ul style="list-style-type: none"> We understand that the AER fulfils this reporting requirement as part of the Wholesale Markets Quarterly and Wholesale Electricity Market Performance reports. Increased FCAS enablement (and associated increases in FCAS costs) driven by AEMO not accounting for demand-side price-responsiveness could be considered as an efficiency issue that could be monitored and reported on by the AER. However, we consider the AER may need substantially more data and details on dispatch forecasting to be able to analyse this.
Monitoring and reporting of significant price outcomes by the AER <i>NER cl 3.13.7 and 3.13.7A</i>	<p>Amended in 2022, this provision is a principles-based reporting requirement where all details are set out in the AER's guideline, rather than the rules. The AER's guideline currently considers the following criteria for a significant price outcome in a given region:</p> <ul style="list-style-type: none"> 30-minute price exceeds \$5,000/MWh in the Spot market consecutive 30-minute prices exceed \$5,000/MW in FCAS markets any other pricing event occurs that the AER considers will assist meeting the objectives of clauses 3.13.7 and 3.13.7A, which may include pricing events in new markets. 	<ul style="list-style-type: none"> While significant prices could be considered as 'high' prices, increased demand-side participation through price-responsive business models is likely to see material demand forecast errors emerge. If not appropriately monitored and addressed, this would have significant negative consequences for spot prices and FCAS prices. We consider this could potentially be reported on by the AER if clauses 3.13.7 and 3.13.7A were revised.