AEMC

INFORMATION

# Integrating price-responsive resources into the NEM

**The Australian Energy Market Commission (the Commission) has made a final rule to allow aggregated consumer energy resources (CER), distributed energy resources and price-responsive load to be scheduled and dispatchable in the national electricity market (NEM). This will result in lower electricity and ancillary service costs, lower emissions and ultimately lower prices for consumers.**

**To drive participation in the early years, the final rule includes a time-limited incentive mechanism. The final rule also establishes new monitoring and reporting functions to evaluate the magnitude and effect of unscheduled price-responsive resources on AEMO's operational demand forecasts.**

## Unscheduled price-responsive resources present a problem and an opportunity

There are a wide range of CER (for example, household batteries) that enable small consumers or parties acting on their behalf to respond to spot prices. Technology advancements are also facilitating large customers to respond to price signals and the number of stand-alone small generators and batteries in the NEM is growing. The increasing number and magnitude of these unscheduled price-responsive resources represents a significant opportunity. However, this responsiveness isn't currently effectively integrated into the wholesale electricity market. It is not directly considered when determining the level of demand, how best to meet this demand or the spot price.

Energy, security and reliability services could be provided more efficiently if these resources were fully integrated. Our final rule establishes:

- dispatch mode that allows currently unscheduled price-responsive resources to be scheduled and dispatchable in the NEM, either in aggregations or individually
- time-limited incentive mechanism to drive participation in dispatch mode in its early years
- monitoring and reporting obligations for AEMO and the AER to transparently evaluate the effect of price-responsive resources on the accuracy of AEMO's short-term demand forecasts, and the efficiency consequences of these effects.

## Dispatch mode provides a flexible framework for price-responsive resources to participate in central dispatch

Our final rule introduces a framework known as 'dispatch mode' into the NEM. This will allow currently unscheduled price-responsive resources to be scheduled and dispatched. Much of the focus of dispatch mode has been on household-based virtual power plants (VPPs). However, dispatch mode is designed to facilitate a wide variety of aggregated small and medium size price-responsive resources participating in the spot market, and competing with large-scale generators and storage. Dispatch mode will allow them to bid into the spot market, set prices, receive dispatch instructions and earn revenue in markets which require scheduling.

By explicitly including unscheduled price-responsive resources in dispatch, AEMO will no longer need to forecast their actions, therefore reducing demand forecast errors and their consequential inefficiencies.

AUSTRALIAN ENERGY MARKET COMMISSION LEVEL 15, 60 CASTLEREAGH STREET SYDNEY NSW 2000
T: 02 8296 7800 E: AEMC@AEMC.GOV.AU W: WWW.AEMC.GOV.AU

The key features of dispatch mode and their benefits are that it:

- Is **voluntary**. No consumer or market participant is required to participate. Instead, it allows participants to nominate and aggregate small resources to participate in dispatch.
- **Leverages existing rules and processes to minimise costs and increase certainty:**
  - Builds on the bidirectional unit (BDU) framework, allowing bids for generation and load.
  - The underlying classification for resources participating as voluntarily scheduled resources (VSR) does not change. For instance, if a retailer (Market Customer) nominates a market connection point as a VSR, this will still be a market connection point but will also have the nomination of VSR. By not creating a new classification, or requiring a change in the classification of connection points participating, participants will have greater flexibility and implementation costs will be reduced.
  - Follows existing conventions regarding decision-making. Most importantly:
    - The NER will set out the key legal requirements for participation in central dispatch. This will create certainty for market participants as the NER provides stability and familiarity.
    - AEMO guidelines will establish the specific operational and technical details for participants to follow. This will allow AEMO to update these details more regularly than if they were placed in the rules and allow them to be tailored to the requirements of participants utilising aggregated small resources.
- Provides **greater flexibility** for participants than existing scheduling requirements. It recognises that continuous operation may be difficult and creates flexibility to allow participants to drop in and out of dispatch. It sets out principles for AEMO to follow when setting technical and operational parameters to ensure requirements on VSRs are only to the extent reasonably necessary to manage the power system.

The Commission's modelling and analysis demonstrates that dispatch mode is likely to result in net benefits to consumers of $800m. This includes estimates of the benefits calculated through market modelling out to 2050 of $834m and costs of implementing dispatch mode and the incentive mechanism of $34m.

## A time-limited incentive mechanism is required to drive participation

Our final rule includes a time-limited incentive mechanism to drive participation in dispatch mode in its early years. This recognises that market-based incentives may be insufficient in the short term to attract participation. It does this by requiring AEMO to conduct tenders to pay participants to enter dispatch mode in the first five years. To make sure that consumers benefit from this paid participation the final rule caps the payments at the estimated benefits per MW of participation and limits the overall payments under the framework at $50m. We consider that long-term participation incentives are likely to be best provided through market and network access.

## AEMO and the AER will monitor and report on the impact of forecast deviations due to unscheduled price-responsive resources

The combination of the level of control required to participate in dispatch mode and the wide range of functions, capabilities and business models for CER mean that many price responsive resources are unlikely to participate in dispatch mode. As the magnitude of these resources grows, they will create challenges for AEMO's demand forecasting.

Our final rule introduces a monitoring and reporting obligation for AEMO to identify the presence and issues created by increased unscheduled price-responsive resources. The AER will then assess the efficiency implications and costs associated with these issues. This framework will help us understand the operation of unscheduled price-responsive resources and their impact on market outcomes. It will also provide evidence for the AEMC to consider whether to introduce structural changes to demand forecasting or a visibility market model in the future. This framework includes only minor changes from the draft rule.

## The more preferable final rule will commence between 2025 and 2027

The final rule provides a schedule for the implementation of dispatch mode, the incentive mechanism and the monitoring and reporting framework:

- Dispatch mode commences 23 May 2027, with AEMO to consult on and publish the VSR guideline by 31 December 2025.
- The incentive mechanism will run between 1 April 2026 to 31 December 2031 (the incentive period).
- AEMO and the AER must release their reporting guidelines by 31 December 2025. AEMO must publish its first quarterly report by 1 April 2026 and its first annual report by 30 September 2026 and the AER must publish its first report by 31 December 2026.

For information contact:

Senior Adviser, **Rachel Thomas** rachel.thomas@aemc.gov.au

Director, **Ben Davis** ben.davis@aemc.gov.au

Media enquiries: media@aemc.gov.au

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