

# MARKET AND SYSTEM OPERATION PROCEDURES, METHODOLOGIES AND GUIDELINES (WHOLESALE DEMAND RESPONSE)

FINAL REPORT AND DETERMINATION

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## EXECUTIVE SUMMARY

The publication of this Final Report and Determination (Final Report) concludes the Rules consultation process conducted by the Australian Energy Market Operator (AEMO) on the Market and System Operation Procedures, Methodologies and Guidelines (Wholesale Demand Response) (Procedures) under the National Electricity Rules (NER).

These changes result from the Wholesale Demand Response (WDR) rule changes, which take effect from 24 October 2021.

In summary:

- The key proposals involve changes to the Market Suspension Compensation Methodology (the Methodology), with the focus on optimal approaches to meeting the market suspension compensation objectives in NER 3.14.5A.
- The other proposals – which involve changes which AEMO considers to be mostly minor, or reflect obligations already described in the NER – are to:
  - Procedures for Issue of Directions and Clause 4.8.9 (Instructions).
  - Intervention Pricing Methodology.
  - Constraint Formulation Guidelines.

NER 3.14.5A(f1) provides for the determination of the compensation payable to each Market Suspension Compensation Claimant in respect of WDR (the Claimant). For these purposes, the benchmark value for WDR is to be determined by the capacity-weighted average of the benchmark costs in respect of a class of Scheduled Generator in the same region as the Claimant, and as selected by AEMO in accordance with the Methodology.

In the Methodology, AEMO is required to specify the approach it adopts in selecting the class of Scheduled Generator to be used when determining the capacity-weighted average of the benchmark costs (NER 3.14.5A(h)(2A)).

AEMO's final determination is to amend the documents listed above in the form published with this Final Report.



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## 1. STAKEHOLDER CONSULTATION PROCESS

As required by the NER, AEMO consulted on these Procedures in accordance with the Rules consultation procedures in NER 8.9.

AEMO’s timeline for this consultation has been as follows:

Deliverable	Indicative date
Issues Paper & Notice of First Stage Consultation published	9 October 2020
First stage submissions closed	17 November 2020
Draft Report & Notice of Second Stage Consultation published	11 December 2020
Second stage submissions closed	29 January 2021
Final Report published	12 March 2021

The publication of this Final Report marks the conclusion of this consultation.

## 2. BACKGROUND

### 2.1. NER requirements

In accordance with NER 8.9, AEMO conducted this consultation in respect of:

- Methodology under NER 3.14.5A(h) and (i).
- Procedures for Issue of Directions and Clause 4.8.9 Instructions under NER 4.8.9(b).
- Intervention Pricing Methodology under NER 3.9.3(e).
- Constraint Formulation Guidelines under NER 3.8.10(c).

### 2.2. Context for this consultation

On 11 June 2020, the Australian Energy Market Commission (AEMC) published the final determination in respect to the rule change to facilitate WDR in the National Electricity Market (NEM), principally through implementing the WDR mechanism.

Under this final rule, large consumers will be able to sell demand response in the wholesale market either directly or through specialist aggregators for the first time.

The rule changes:

- Introduce a new market participant category, a Demand Response Service Provider (DRSP).
- Place obligations on DRSPs that replicate those applied to scheduled participants, including similar information provision and scheduling obligations.
- Set out a process for having baseline methodologies determined and applied to wholesale demand response units (WDRUs).
- Provide for DRSPs to be settled in the wholesale market for the WDR they have provided at the prevailing spot price.
- Set out consequential changes to the NER, including changes to Reliability and Emergency Reserve Trader (RERT) provisions.
- Make additional changes the NER, such as the demand side participation information provisions, to improve the integration of the demand side.



On 10 September 2020, the AEMC published the final determination in respect to the rule change to improve the intervention mechanisms in the NEM. The final rule removes the obligation on AEMO to counteract and minimise the effect on interconnector flows during an intervention to contribute to minimising costs for consumers. This final rule came into effect on 17 September 2020.

### **2.3. First stage consultation**

On 9 October 2020, AEMO issued the Notice of First Stage Consultation and published the Issues Paper and the Draft Procedures.

AEMO received one written submission from the Energy Queensland, published at:

<https://aemo.com.au/en/consultations/current-and-closed-consultations/market-and-system-operation-procedures-methodologies-and-guidelines-wholesale-demand-response>

### **2.4. Second stage consultation**

On 11 December 2020, AEMO issued the Notice of Second Stage Consultation and published the Draft Report and Determination (Draft Report) and the Draft Procedures.

AEMO received no further submissions.

## **3. DISCUSSION OF MATERIAL ISSUE**

### **3.1. Calculation of Benchmark Values for Market Suspension Compensation Methodology**

#### **3.1.1. Issue summary and submissions**

NER 3.14.5A(f)(1) provides for the determination of the compensation payable to each Claimant in respect of WDR.

For these purposes, the benchmark value for WDR is to be determined by the capacity-weighted average of the benchmark costs in respect of a class of Scheduled Generator in the same region as the Claimant, as selected by AEMO and in accordance with the Methodology.

In the Methodology, AEMO is required to specify the approach to be adopted by AEMO in selecting the class of Scheduled Generator to be used when determining the capacity-weighted average of the benchmark costs (NER 3.14.5A(h)(2A)).

In the draft determination, AEMO identified that the class of Scheduled Generators which behaves most similarly for WDR purposes is large scale batteries, which operate both on the generator and load side. The benchmark value for large scale batteries is zero.

AEMO received no submissions in the second stage consultation.

#### **3.1.2. AEMO's assessment**

In determining which class of Scheduled Generator would be the most applicable to WDR, AEMO considered the following:

- In the short term, AEMO expects that most WDR is likely to be loads with the ability to reduce demand.
- All benchmark values are for Scheduled Generators which have defined costs for fuel and variable operational expenses, as well as a heat rate (the inputs for the benchmark calculation).



- There are no costs which can be calculated using the current methodology and inputs to replicate a load reducing demand.
- The new rule specifically requires AEMO to use an existing class of Scheduled Generator, as opposed to adding a new class.

### **3.1.3. AEMO's conclusion**

Accordingly, the class of Scheduled Generators which behaves most similarly for WDR purposes is large scale batteries, which operate both on the generator and load side. The benchmark value for large scale batteries is zero.

## **4. FINAL DETERMINATION**

AEMO's final determination is to amend the following Procedures in the form published with this Final Report, with effect from 24 October 2021.

- Methodology under NER 3.14.5A(h) and (i).
- Procedures for Issue of Directions and Clause 4.8.9 Instructions under NER 4.8.9(b).
  - Version 21 to reflect the intervention mechanism rule change effective 12 March 2021
  - Version 22 to align with the WDR rule change effective 24 October 2021
- Intervention Pricing Methodology under NER 3.9.3(e).
- Constraint Formulation Guidelines under NER 3.8.10(c).



## APPENDIX A. GLOSSARY

Term or acronym	Meaning
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
DRSP	Demand Response Service Provider
NEM	National Electricity Market
NER	National Electricity Rules
RERT	Reliability and Emergency Reserve Trader
Methodology	Market Suspension Compensation Methodology
WDR	Wholesale Demand Response
WDRU	Wholesale Demand Response Unit