



NEM Event – Directions Report 28 March 2020

February 2021

Important notice

PURPOSE

Where the Australian Energy Market Operator (AEMO) intervenes in the National Electricity Market (NEM) through the use of directions, AEMO must publish a report in accordance with National Electricity Rules (NER) clauses 4.8.9(f) and 3.13.6A(a). This report satisfies those NER obligations and is based on information available to AEMO at 13 January 2021.

Unless otherwise indicated, terms in this report have the same meanings as those defined in the NER.

All references to time in this report are based on Australian Eastern Standard Time (AEST).

Disclaimer

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ABBREVIATIONS

| Abbreviation | Expanded name |
|--------------|-----------------------------------|
| AEMO | Australian Energy Market Operator |
| DI | Dispatch Interval |
| MN | Market Notice |
| NEM | National Electricity Market |
| NER | National Electricity Rules |
| PS | Power Station |
| SA | South Australia |
| GT | Gas Turbine |
| ST | Steam Turbine |

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1. Summary

Clause 4.8.9 of the National Electricity Rules (NER) allows AEMO to intervene in the market by issuing directions or clause 4.8.9 instructions, if AEMO is satisfied that it is necessary to maintain or re-establish the power system to a secure, satisfactory, or reliable operating state. Section 116 of the National Electricity Law allows AEMO to issue directions to take certain action if AEMO considers that it is necessary to maintain power system security or for reasons of public safety.

On 28 March 2020, AEMO issued a direction to a Victorian Market Participant to maintain power system security. This direction is summarised in Table 1.

Table 1 Summary of the Victorian direction on 28 March 2020

| Direction | Directed Participant | Event No. | Issue time | Cancellation time | Direction instruction |
|-------------------------------------|-----------------------------------|-----------|-------------------------|-------------------------|--|
| Mortlake Power Station (PS) unit 12 | Origin Energy Electricity Limited | 1 | 0405 hrs, 28 March 2020 | 0830 hrs, 28 March 2020 | Synchronise and follow dispatch targets from 0405 hrs, 28 March 2020 |

2. Intervention assessment

2.1 The need for intervention

The direction to Mortlake PS was required to manage voltage violations. The unplanned outages of Loy Yang A PS unit 4 and Yallourn W PS unit 2 resulted in real time contingency analysis voltage violation. All voltage control options were exhausted prior to the direction being issued. Voltage control activities included the de-energisation of multiple 500 kV transmission lines¹, activation of a non-market ancillary services contract, and network constraints.

Mortlake PS unit 12 was bid unavailable at 0402 hrs, 28 March 2020. Table 2 contains details of the Mortlake PS rebid.

Table 2 Participant offers

| Event No. | Unit | Offer date | Bid |
|-----------|---------------------|----------------------|--|
| 1 | Mortlake PS Unit 12 | 0402 hrs, 28/03/2020 | Rebid to de-commit from 0400 hrs, 28 March 2020 ^A |

A. Rebid reason: 0401A AVOID UNECONOMIC START SL

2.2 Assessment of market response and latest time to intervene

Under NER clause 4.8.5A(a) and (c), AEMO must notify the market of any anticipated power system security or reliability issue, and the latest time for market response before AEMO would need to intervene.

¹ Hazelwood – South Morang No2, Keilor – Sydenham, and Keilor – South Morang lines

AEMO contacted all participants who operate suitable generating units to confirm their availability and the latest time to intervene.

For this direction, AEMO assessed the latest time to intervene taking account of the advised lead times. The latest time to intervene is listed in Table 3.

Table 3 Summary of latest time to intervene

| Event No. | Latest time to respond | Market Notice |
|-----------|-------------------------|---------------|
| 1 | 0400 hrs, 28 March 2020 | MN 75029 |

3. Intervention process

AEMO considers that it followed all applicable processes under NER clause 4.8 for the management of the direction on 28 March 2020².

3.1 Adequacy of responses to AEMO inquiries

NER clause 4.8.5A(d) permits AEMO to request information from Scheduled Network Service Providers, Scheduled Generators, Semi-Scheduled Generators, and Market Customers.

AEMO is satisfied with the timeliness, adequacy, and effectiveness of all responses to its requests for information prior to issuing the direction on 28 March 2020.

3.2 Participant ability to comply with the intervention

NER clause 4.8.9(d) requires that a Registered Participant must immediately notify AEMO of its inability to comply, or intention not to comply, with a direction or clause 4.8.9 instruction.

AEMO is satisfied with that the relevant participant complied with the directions listed in Table 1.

4. Dispatch and pricing outcomes

4.1 Changes to dispatch outcomes due to the directions

The direction resulted in approximately 141 megawatt hours (MWh) of synchronous generation being directed into the market.

Intervention pricing did not apply for this event.

² AEMO. Power system operating procedure SO_OP 3707, "Procedures For Issue Of Directions And Clause 4.8.9 Instructions", 06 September 2019, available at https://aemo.com.au/-/media/files/electricity/nem/security_and_reliability/power_system_ops/procedures/so_op_3707-procedures-for-issue-of-directions-and-clause-4-8-9-instructions.pdf?la=en.

Under clause 3.8.1 of the NER, AEMO must operate a central dispatch process to balance power system supply and demand, using its reasonable endeavours to maintain power system security in accordance with NER Chapter 4 and the power system security standards. AEMO notes that in the absence of directions for system security, the central dispatch process would have produced an outcome which would have resulted in the operation of the power system in an insecure state and would therefore have been an infeasible dispatch solution.

4.2 Direction costs

The compensation recovery costs for the direction on 28 March 2020 were \$36,184. Direction compensation recovery data can be found on the AEMO website³.

5. Conclusions and further actions

AEMO issued a direction to a Victorian Market Participant to maintain power system security on 28 March 2020.

AEMO is satisfied that all applicable procedures and processes were followed in assessing the need for intervention, determining the latest time to intervene, enacting and managing the intervention and seeking market response from all generators capable of meeting the system strength requirements. The market was informed after the direction was issued.

AEMO is also satisfied with the timeliness and adequacy of participant responses and communication throughout.

³ AEMO. Direction Compensation Recovery, available at <https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/data-nem/settlements-data/direction-compensation-recovery>.