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# Declared Wholesale Gas Market – Intervention Report

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**June 2021**

## Notice of threat to system security

A report into the notice of threat to system security for gas day 21 June 2021

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# Important notice

## **PURPOSE**

AEMO has prepared this report pursuant to rule 351 of the National Gas Rules, using information available as at 28 June 2021, unless otherwise specified.

## **DISCLAIMER**

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# 1. Introduction

On Monday 21 June 2021, AEMO notified the market of a threat to system security in the Victorian Declared Wholesale Gas Market (DWGM) due to a trip of an offshore platform impacting the output of Longford Gas Plant (Longford). This reduction in Longford led to a forecast pressure breach at Dandenong City Gate (CG) and Sale CG.

AEMO identified that increased injections from the Dandenong LNG facility, VicHub and/or TasHub, were required to increase net daily injection quantities by 40 TJ. Consequently, AEMO determined that it was appropriate to issue a notice of a threat to system security, seeking a market response, and wait until the next schedule to see if an intervention was required.

If pressures within the DWGM are forecast to fall below minimum operating limits, AEMO can schedule out-of-merit-order<sup>1</sup> injections to maintain system security. However, during this event, lower demand and an increase in Longford output resulted in no out-of-merit-order injections being required and there was no impact on the market.

Rule 351 of the National Gas Rules (NGR) requires that AEMO investigate and prepare a report following an event which is or may be a threat to system security. Rule 351 also requires that AEMO assess and advise on:

- the adequacy of the provisions of the NGR relevant to the event or events
- the appropriateness of actions taken by AEMO in relation to the event or events
- the costs incurred by AEMO and Registered participants as a consequence of responding to the event or events.

This report is published in accordance with rule 351(2) of the NGR. All times used in this report are in Australian Eastern Standard Time (AEST) and a chronology of events is included in Appendix A1.

## 2. Event Summary

At 12.16 hrs on gas day 21 June 2021, AEMO was notified that there had been a trip of an offshore platform supplying Longford. This trip followed a high-demand morning as a result of cold temperatures and a high level of Gas-fired Power Generation (GPG). At 14.00 hrs AEMO applied a constraint, at Esso Australia's (Esso) request, at Longford injection meter to 701 TJ from 14.00 hrs (a daily reduction of 30 TJ).

A notice of a threat to system security and a call for a market response was issued at 14.48 hrs on 21 June 2021. This was due to the potential for pressure breaches to occur at Dandenong CG and Sale CG as a result of the reduced supply. AEMO indicated that the market could alleviate the threat by increasing injections from the Dandenong LNG Facility, VicHub and/or TasHub injection facilities to obtain an increase in net daily injection quantities of 40TJ.

At 17.31 hrs AEMO notified the market that constraints had been placed on VicHub and TasHub injection/withdrawal meters to profile net injections from 18.00 hrs to 22.00 hrs. At 19.15 hrs AEMO observed that profiling was not occurring at VicHub or TasHub, and contacted both which resulted in the profiling commencing at around 20.00 hrs. This lack of profiling is discussed further in section 3.1.4.

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<sup>1</sup> Out-of-merit-order injections are scheduled in merit order specific to an injection facility but are out-of-merit-order in context of all bids in the market.

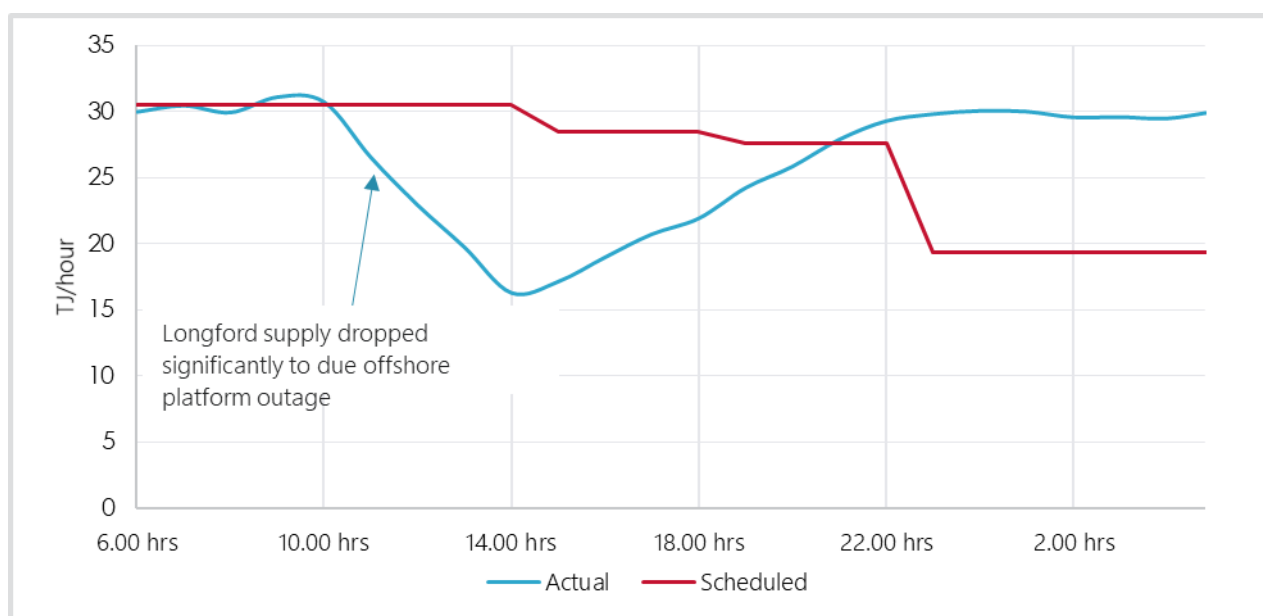
At 20.51 hrs Esso advised that the daily volume for Longford would be 634 TJ, a reduction of 60 TJ from previous advice.

In this event there was no requirement for intervention, as demand tracked lower than forecast, and Longford ramped up production during the day. The threat to system security ended at 21.54 hrs on 21 June 2021.

## 2.1 Longford supply

Longford experienced offshore platform issues from mid-morning, and the condition continued to deteriorate until 14.00 hrs such that the market was notified of a threat to system security at 14.48 hrs and an ad hoc schedule was considered, but not used, at 15.20 hrs. As shown in Figure 1 Longford eventually ramped up but there was still uncertainty regarding the total daily production.

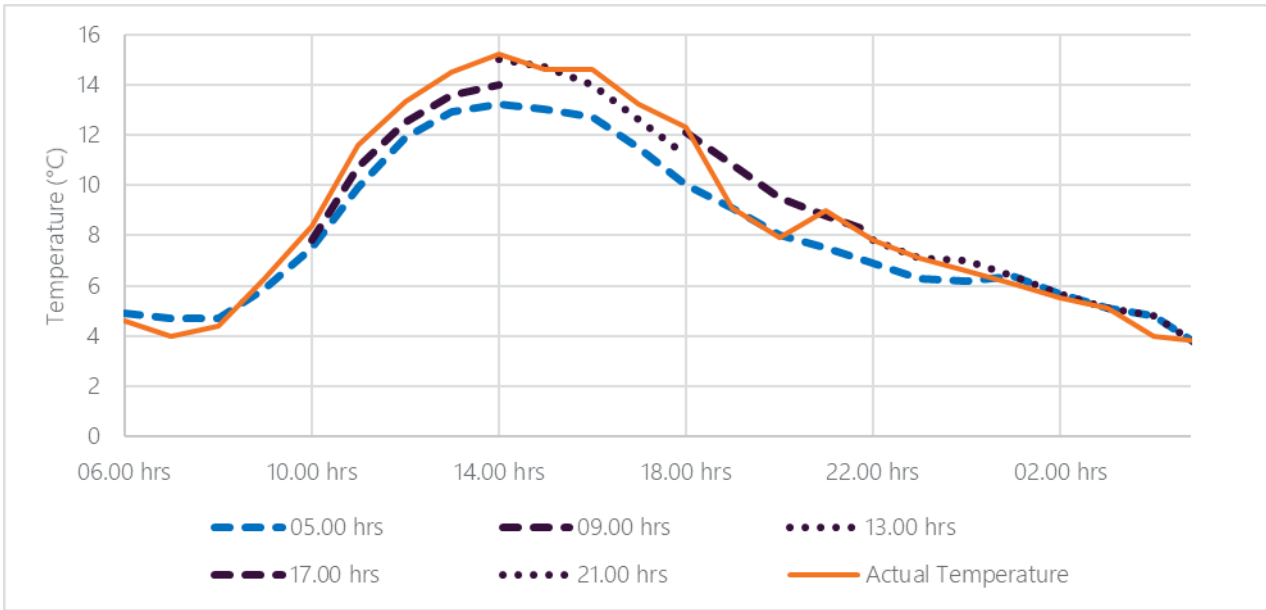
**Figure 1 Longford scheduled and actual supply**



## 2.2 Weather profile

Temperature initially tracked slightly lower than forecast but increased above forecast after 09.00 hrs as can be seen in Figure 2. This resulted in the actual demand being lower than forecast over most of the day.

**Figure 2 Forecast and Actual Temperature - Melbourne Olympic Park**



### 2.3 Actual System Demand

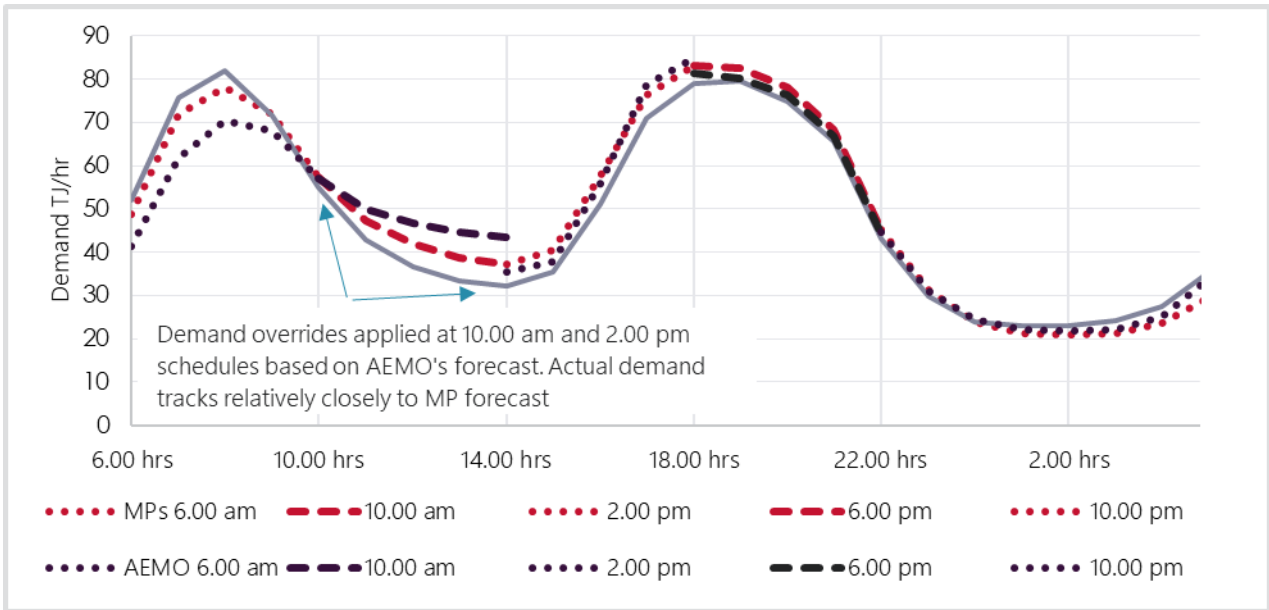
The demand forecast for AEMO and the Market Participants (MP) can be seen in Figure 3 for gas day 21 June 2021. Actual demand tracked relatively closely to the MPs forecast profile. In aggregate, the MPs had forecast a daily system demand of 1,009 TJ and a GPG forecast of 206 TJ at the 6.00 am schedule.

The actual daily demand was 1,168 TJ, which was lower than both the MP and AEMO daily forecast. Forecasts for GPG did not change materially over the day and accounted for 190 TJ of the overall daily demand.

AEMO applied demand forecast overrides of 21 TJ and 35 TJ, at the 10.00 am and 2.00 pm schedules respectively, in line with the Demand Override Methodology<sup>2</sup>. This additional demand override resulted in additional gas being injected at the two schedules and given that overall demand was lower than forecast this action would have helped alleviate the need to intervene in the market.

<sup>2</sup> Available at <https://aemo.com.au/-/media/files/gas/dwgm/2009-15/demand-override-methodology.pdf>.

**Figure 3 Comparison of forecast system demand and actual system demand by schedule**



## 3. Assessment of event

At 14.48 hrs on 21 June 2021 AEMO issued a notice of a threat to system security and called for a market response due to an outage at Longford Gas Plant. This section assesses the adequacy of the rules in accordance with their application at the time of the event.

### 3.1 Adequacy of Part 19 of the NGR

AEMO has assessed the application and adequacy of the NGR against the following sections:

- NGR 341 Notice of threat to system security
- NGR 342 Market response to threat to system security
- NGR 351 Intervention Report
- NGR 216 Failure to conform to scheduling instructions

#### 3.1.1 Notice of threat to system security

Rule 341 requires that if AEMO believes there is a potential threat to system security, it must notify registered participants, without delay, the details of that threat to system security. In this case, AEMO believed that a threat was indicated by the potential pressure breaches at Dandenong CG and Sale CG due to a combination of high demand and the reduction of Longford production.

#### 3.1.2 A market response

AEMO assessed whether an ad hoc schedule would be required and decided that a market response at the next scheduling interval could alleviate any potential demand shortfalls.

As per rule 342, when AEMO considers that a threat to system security could subside without intervention, AEMO must provide Registered participants with information regarding the threat; and any actions required

that could alleviate the threat. The request in the market response was for an additional 40 TJ of net injections from the Dandenong LNG facility, VicHub and/or TasHub injection facilities.

The Wholesale Market System Security Procedures currently consider that the injection of out-of-merit-order gas is an intervention<sup>3</sup>. AEMO notes that there was sufficient gas bid into the market on this occasion, and if the procedures allowed the gas could be scheduled by constraining this gas into the market without the need to issue a notice of a threat, or calling for a market response.

AEMO's review of the NGR is that this could be achieved without any Rule changes, but with minor changes to the following AEMO Market Procedures:

- Wholesale Market System Security Procedures (Victoria)
- Wholesale Market Gas Scheduling Procedures (Victoria)

AEMO finds that the NGR provisions are adequate, however, AEMO considers that further review and consultation should be undertaken with regards to:

- Whether AEMO must issue a threat to system security to call for a market response where that gas is already bid into the market
- The need to issue a threat to system security to constrain on gas that has already been bid into the market

### 3.1.3 Intervention Report timing

NGR 351 places an obligation on AEMO to publish a report within 10 business days after a threat to system security event. AEMO has adopted the following approach to reporting on these events, wherever possible:

- Investigate and publish a report based on immediately available data within 10 business days of the relevant event.
- Where not all information necessary to complete the required assessment is available, that report will be flagged as preliminary, with a final report to be published once the additional information is received and analysed.

For the purposes of this report, AEMO believes it has all necessary information and does not intend to publish a subsequent report.

### 3.1.4 Failure to conform to scheduling instructions

NGR 216 places an obligation on MPs to comply with scheduling instructions. In this incident AEMO had confirmed with the facility operators of TasHub and VicHub that constraints could be applied, to profile the supply of gas at these points. At 17.31 hrs AEMO notified the market that these constraints had been applied, and the 6.00 pm schedules reflected this.

However, at 19.15 hrs AEMO observed that profiling was not occurring at VicHub or TasHub, and contacted both which resulted in the profiling commencing at around 20.00 hrs. AEMO will investigate this further, as the facility operators are responsible for implementing the physical constraints, but the obligation is on the MPs to ensure that they are conforming with the latest scheduling instructions in all material respects.

## 3.2 Appropriateness of actions taken by AEMO

AEMO's objectives during this event were to:

- Continue to operate in accordance with the NGR and the Wholesale Market Procedures
- Limit the risk of involuntary curtailment to customers including any GPG
- Alleviate the threat to system security and return the DWGM to normal operating conditions.

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<sup>3</sup> The Procedures specify that injecting out-of-merit-order gas is as per rule 343(1), which is an intervention.



NGR 206 requires that AEMO schedule injections into and withdrawals from the DTS in accordance with bids and must:

- Comply with the gas scheduling procedures; and
- Use its reasonable endeavours to operate within the system security procedures

As a result of the reduction in Longford output, AEMO's modelling indicated a potential breach of the minimum operating pressure at Dandenong CG and Sale CG during the 6.00 pm schedule. In this event AEMO took all reasonable steps to assess the forecast and notified the market to alleviate this threat by calling for a market response.

### 3.3 Cost of intervention

AEMO did not require any out-of-merit-order injections to be scheduled in response to the notice of a threat to system security issued for gas day 21 June 2021. As a result, there was no market impact.

## 4. Conclusion

AEMO issued a notice of threat to system security in the Victorian Declared Wholesale Gas Market for gas day 21 June 2021 with regards to a potential pressure breach at Dandenong and Sale City Gates. The threat subsided without intervention at 21.54 hrs on 21 June 2021. AEMO was able to place a constraint to profile injections from VicHub and TasHub to support Sale CG pressure, Longford was able to ramp up production, and the actual demand was lower than the forecast demand.

AEMO will further investigate the constraints that were applied at VicHub and TasHub with regards to the possibility that scheduling instructions were not complied with.

Rule 351 of the National Gas Rules (NGR) requires that AEMO investigate and prepare a report following an event which is or may be a threat to system security. AEMO has assessed the application and adequacy of associated NGR provisions and finds that these provisions were applied correctly.

Please direct any feedback or questions regarding this report to [GasMarket.Monitoring@aemo.com.au](mailto:GasMarket.Monitoring@aemo.com.au).

# A1. Chronology

Date/Time (AEST)	Event/Action	Details
21 June 2021 08.43 hrs	AEMO demand forecast override	AEMO applied a demand override to the 10.00 am schedule due to: <ul style="list-style-type: none"> <li>AEMO total demand forecast of 1240 TJ, including 205 TJ of GPG.</li> <li>Observed high demand across the morning</li> </ul> AEMO noted that there was low linepack in Longford to Melbourne Pipeline
12.16 hrs	Esso contact AEMO	Esso advised AEMO that an offshore platform for Longford has tripped, and a restart is being attempted. AEMO noted that the injection rate had decreased over the last hour.
12.21 hrs	AEMO assessment	AEMO's modelling indicated a potential pressure breach at Sale CG by 21.00 hours.
13.17 hrs	AEMO contact Lochard, Jemena and APA	AEMO requested Lochard, APA and Jemena to confirm the maximum rates that Iona, Culcairn Interconnect and VicHub can inject at.
13.42 hrs	Esso contact AEMO	Esso advised that Longford total daily volume would be 701 TJ (30 TJ short).
13.43 hrs	AEMO contact APA Networks	AEMO requested confirmation of minimum operating pressure required at Sale CG.
13.56 hrs	AEMO contact Esso	AEMO received update from Esso with regards to potential for restart of Longford, including indicative timing and production estimates.
13.57 hrs	APA Networks contact AEMO	APA Networks confirms the minimum inlet pressure at Sale CG is 4600 kPa over the evening peak (a reduction of 200 kPa).
14.15 hrs	AEMO observation	Longford's injection rate declined
14.22 hrs	AEMO assessment	AEMO's modelling indicated that a pressure breach at Sale CG (4600 kPa) will occur from 19.00 hrs if no action is taken.
14.48 hrs	Market notice	AEMO issued a market notice indicating a threat to system security and requesting a market response.
14.52 hrs	APA contact AEMO	APA advised that TasHub has the capability to supply up to 5TJ/hr based on the design limit but is dependent on Tasmania Gas Pipeline's linepack.
14.56 hrs	AEMO assessment	AEMO's modelling indicated that an ad hoc schedule may be required.
15.20 hrs	AEMO assessment	AEMO's modelling indicated that no ad hoc schedule was required with Dandenong CG set point adjusted lower at 15.00 hrs and Gooding Compressor Station turned off at 15.10 hrs to preserve the Longford to Melbourne Pipeline linepack. Longford's ramp up rates are being actively monitored.
15.37 hrs	Jemena contact AEMO	Jemena advised that VicHub can supply additional 5TJ/hr of out-of-merit-order gas if required until 22.00 hrs without impacting Sydney STTM.
16.31 hrs	Market notice	AEMO revised Longford's daily rate down to 692 TJ from 18.00 hrs, at Esso's request.
16.53 hrs	AEMO assessment	AEMO's modelling indicated increased supplies from VicHub/TasHub will be sufficient to avert the threat to system security assuming Longford held its current rate and gradually increased over the next four hours.
17.26 hrs	AEMO contact Jemena	AEMO notified Jemena that AEMO intends to profile VicHub flow from 19.00 hrs to 23.00 hrs at 3.6 TJ/hr and then cease the flow from 23.00 hrs onwards. Jemena confirmed they can facilitate this.
17.31 hrs	6.00 pm schedule	Profiled injections from VicHub and TasHub were scheduled with market notices sent accordingly, and AEMO approved the 6.00 pm schedule with no LNG scheduled.
19.14 hrs	AEMO contact Jemena	AEMO contacted Jemena with regards to VicHub not following the scheduled injection profile
19.38 hrs	AEMO contact TasHub	AEMO contacted TasHub as it was not following the scheduled profile
20.16 hrs	TasHub contact AEMO	TasHub contacted AEMO to advise that it will follow the scheduled profile.
20.25 hrs	Jemena contacted AEMO	Jemena contacted AEMO to advise they would use best endeavours to inject the requested profile but may need until midnight to inject the required quantities.
20.51 hrs	Market notice	AEMO revised the constraint for Longford to 634 TJ/day for the 10.00 pm schedule, at Esso's request, and a market notice was sent accordingly.
21.55 hrs	Market notice	AEMO notified the market that the threat to system security had ended.