



Declared Wholesale Gas Market – Intervention Report

June 2019

Notice of threat to system security

A report into the notice of threat to system security on 27 May 2019

IMPORTANT NOTICE

Purpose

AEMO has prepared this report pursuant to rule 351 of the National Gas Rules, using information available as at 5 June 2019, unless otherwise specified.

Disclaimer

AEMO has made every effort to ensure the quality of the information in this report but cannot guarantee its accuracy or completeness. Any views expressed in this report are those of AEMO unless otherwise stated, and may be based on information given to AEMO by other persons.

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- are not liable (whether by reason of negligence or otherwise) for any statements or representations in this report, or any omissions from it, or for any use or reliance on the information in it.

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1. Introduction

AEMO issued a notice of a threat to system security in the Victorian Declared Wholesale Gas Market (DWGM) for gas day 27 May 2019.

Rule 351 of the National Gas Rules (NGR) requires that AEMO investigate and prepare a report following an intervention by AEMO or 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; and
- 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 AEST.

2. Event Summary

Cold temperatures¹ in Victoria on 27 May 2019 resulted in a DWGM demand of 1,025 TJ, with Longford Gas Plant's (Longford²) scheduled injections accounting for around 70% of the supply to meet this demand. Longford had been tracking around 10 TJ behind schedule at around 14.00 hrs and by 15.07 hrs on 27 May, Longford injections significantly decreased. AEMO requested multiple updates and clarification from Longford but was unable to obtain clear information on when the flow rates from Longford would increase, or the cause of the decreased injections.

Using Longford's lower flow rate, AEMO's modelling indicated that forecast pressures at Dandenong City Gate (DCG) Inlet would be below the operating limits by 20.00 hrs. As a result, AEMO issued a notice of a threat to system security at 16.53 hrs.

Longford requested a Supply Demand Point Constraint (SDPC) of 700 TJ at 17.31 hrs, relative to their schedule of 729 TJ. However, this was past the cut-off time to be included in the 6.00 pm scheduling interval.

AEMO, in line with modelling, intervened and scheduled 20 TJ of LNG in the 6.00 pm to 10.00 pm scheduling interval to avoid breaching DCG Inlet pressure.

At 18.20 hrs the Longford compressor tripped, resulting in gas that was flowing into the Eastern Gas Pipeline (EGP) being redirected into the Victorian Declared Transmission System (DTS). At 18.44 hrs, Jemena notified AEMO of this trip. The consequence of this was a faster than expected improvement to pressures into the DTS. Refer to Figure 1.

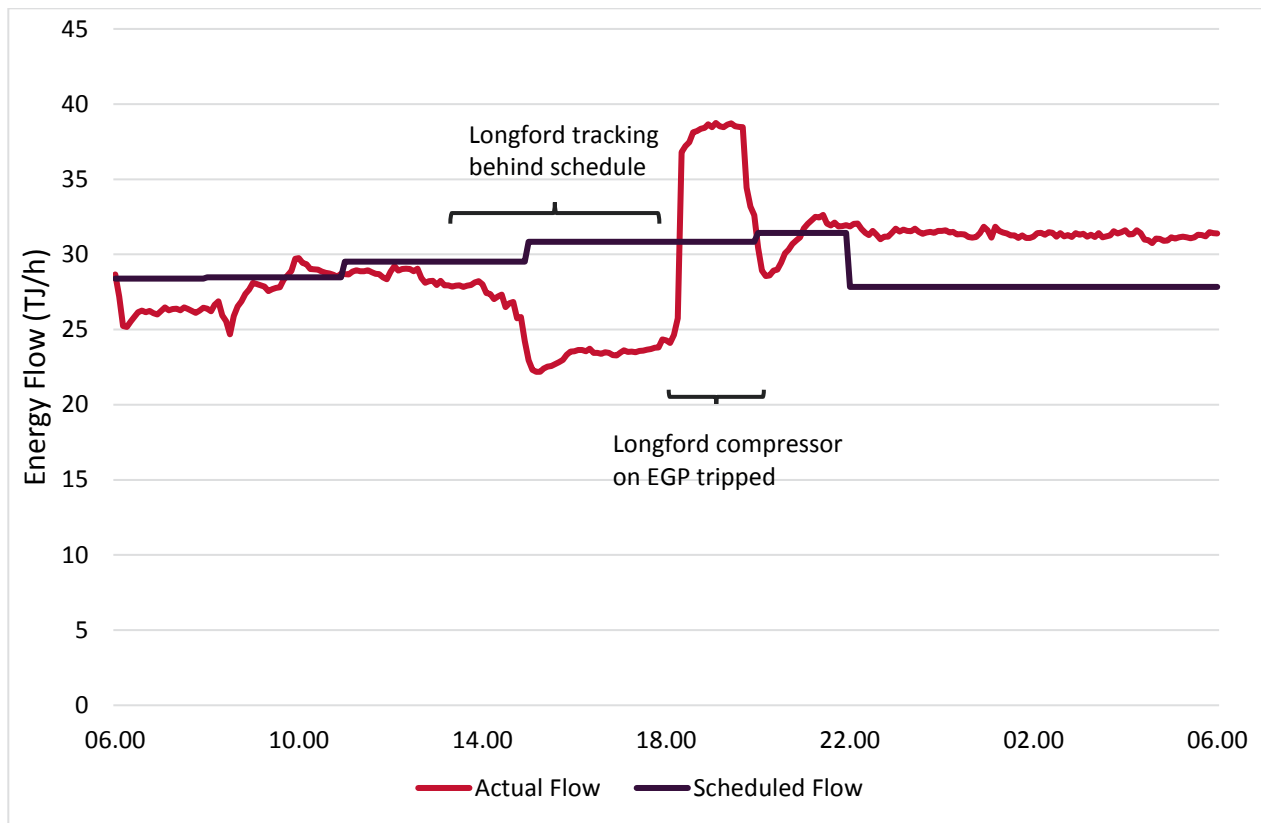
At 21.25 hrs, AEMO notified the market that the threat to system security for gas day 27 May had ended.

A chronology of events is included in appendix A1.

¹ Melbourne (Olympic Park) maximum temperature was 14.0°C

² The term Longford is used interchangeably to describe both the gas plant and the communications with both operational and commercial personnel.

Figure 1 Longford Schedule and Injections for Gas Day 27 May 2019



3. Assessment of event

This event was caused by two key factors, high system demand combined with under delivery from Longford. It is possible that the DTS could have been operated in a different manner, that would have avoided the need to issue a threat to system security. However, this would have needed timelier information from Longford.

3.1 Adequacy of Part 19 of the National Gas Rules

In respect of this event, AEMO has assessed the application and adequacy of the NGR, with a primary focus on the following provisions:

- NGR 277 Operating agreements for connected facilities and NGR 219 Injection and withdrawal confirmations
- NGR 341 Notice of threat to system security
- NGR 351 Intervention Reports

3.1.1 Operating agreements and injection and withdrawal confirmations

A requirement of NGR 277 is that the owner or operator of facility that is connected to the DTS must comply with any applicable operating agreement entered under the National Gas Law (NGL 91BG).

Amongst other requirements, Operating Agreements generally specify that production facility operators must immediately notify AEMO of information regarding:

- Material changes in gas injections

- Material changes in delivery profiles
- Facility outages and other events which have caused or may cause or contribute to a threat to system security.

AEMO received no advice on the changes to the delivery profile at Longford. AEMO contacted Longford at 15.07 hrs requesting clarification regarding the decreased flow rates from Longford.

Longford had requested a Supply Demand Point Constraint (SDPC) of 700 TJ at 17.31 hrs, however this was 2 hours after the initial reduction in flow injections.

AEMO did not receive advice that the Longford compressor on the EGP had tripped. This information was obtained from Jemena at 18.44 hrs after AEMO contacted Jemena with regards to low odorant readings at VicHub and TasHub. AEMO considers this to be a material change in delivery profile.

NGR 219 also requires Producers to promptly notify AEMO if, for any reason, there is a material change to the quantity of gas that it intends to inject into the DTS. AEMO notes the definition of material change is not defined in Part 19 of the NGR, however, AEMO had been informing Longford on the day that the under delivery of gas was likely to result in a threat to system security. As such AEMO considers this was a material change and an SDPC should have been applied much earlier than 17.31 hrs.

AEMO's assessment is that the Rules are adequate for 27 May 2019, however AEMO considers that Longford's adherence to them was lacking.

3.1.2 Notice of threat to system security

NGR 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.

At 16.53 hrs, AEMO notified the market of the threat to system security, calling for a market response as per NGR 342. The timing of the notice calling for a market response did not allow Market Participants a significant amount of time to respond.

If AEMO reasonably considers that a threat to system security is unlikely to subside without intervention (NGR 343), AEMO must intervene in the market by taking any measures it believes are reasonable and necessary to overcome the threat to system security. AEMO notified the market at 17.38 hrs that Dandenong LNG will be injected in response to the threat to system security.

AEMO notes that NGR 343 specifies some of the options available to AEMO when intervening in the market are:

- Curtailment in accordance with the emergency curtailment list
- Increasing withdrawals
- Requiring gas to be injected which is available but not bid into the market
- Injecting off-specification gas
- Requiring Registered participants to do any reasonable act or thing that AEMO believes necessary in the circumstances.

In this event, the issue was the potential pressure breach at DCG Inlet. This could be resolved by scheduling out-of-merit-order (injection bids above the market price) gas from Dandenong LNG³. This is gas that has already been bid into the market. In this assessment of the NGR provisions (specifically NGR 213, 214 and 215) AEMO notes that it may be within the current Rules for AEMO to constrain on gas that has already been bid in without needing to notify the market of a threat to system security. However, this would need to consider **existing constraints and system security**.

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

³ The bids at Dandenong LNG are scheduled in merit order, however, they are not in merit order when considering the market-wide bids.

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

Subject to further consideration of the NGR provisions, on initial assessment, this would require minor changes to the following AEMO Market Procedures:

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

3.1.3 Intervention Report Timing

NGR 351 places an obligation on AEMO to publish an Intervention Report within 10 business days after the event. AEMO has previously raised this as concern given the limited time this placed on AEMO to conduct a thorough investigation, given the requirement to assess:

- the adequacy of the Rules;
- the appropriateness of actions taken by AEMO; and
- the costs incurred by AEMO and Registered participants as a consequence of responding to the event or events.

AEMO has reviewed this and AEMO intends to adopt 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.

3.2 Appropriateness of actions taken by AEMO

AEMO's objectives during this event were to:

- Operate in accordance with the NGR and the Wholesale Market Procedures;
- Limit the risk of involuntary curtailment to customers including Gas Powered Generation;
- Alleviate the threat to system security and return the DTS to normal operating conditions.

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.

In this event, AEMO took all reasonable steps to assess the forecasts and notify the market accordingly.

AEMO successfully produced a 6.00 pm schedule and maintained system security through the scheduling of out-of-merit-order gas from Dandenong LNG.

3.3 Costs of intervention

In response to the notice of a threat to system security issued for gas day 27 May 2019, AEMO scheduled 20 TJ of out-of-merit-order Dandenong LNG injections. This was consistent with the approach outlined in the market notices issued to Market Participants.

The market impact resulting from this event was in the form of additional ancillary payments, and corresponding uplift payments, of \$45,637.

4. Conclusion

AEMO issued a notice of threat to system security, and subsequently injected out-of-merit-order gas, in the Victorian DWGM for gas day 27 May 2019 due to Longford's under delivery of gas and high DTS demand.

This resulted in \$45,637 of additional ancillary and uplift payments.

AEMO has assessed the application and adequacy of the NGR provisions and finds that these provisions were applied correctly. AEMO considers that Longford could have done more to provide timely responses and regular updates with regards to the Longford injections, as per the Operating Agreement and NGR 219. AEMO supports efficient market operations and increased transparency in gas markets and believe the Rules do provide for this to occur, and it is important for Registered participants to have processes and systems in place to provide the greatest level of transparency as early as possible. AEMO has highlighted several provisions within the Rules where further review could be conducted to change the way AEMO operates in these events into the future. AEMO intends to raise these issues with the Gas Wholesale Consultative Forum.

Please direct any feedback or questions regarding this report to GasMarket.Monitoring@aemo.com.au.

A1. Chronology

Date/Time (AEST)	Event/Action	Details
27 May 2019 15.07 hrs	Longford injections decrease	AEMO contacted Longford Gas Plant (Longford) as injections had decreased from Longford. Longford informed AEMO that it was due to an offshore issue. AEMO requested an update in the next 30 minutes from Longford, to enable AEMO to assess the risk to the DTS. AEMO highlighted to Longford the importance of this information given the high gas demand for the day.
27 May 2019 15.35 hrs	AEMO forecast	AEMO's forecasting indicated pressure breaches would occur at the DCG Inlet and Sale City Gate by 20.00 hrs if Longford's flow rate did not improve.
27 May 2019 15.55 hrs	AEMO contact APA	AEMO advised the APA Control Room (APA) that LNG injections were likely to be scheduled.
27 May 2019 16.22 hrs	AEMO contact Longford	AEMO requested an update from Longford, given the dependence on the Longford flow rate on the need to schedule LNG injections. Longford confirmed they would be able to deliver the nominations for the gas day and would keep AEMO updated of any issues.
27 May 2019 16.25 hrs	AEMO forecast	AEMO's forecast modelling indicated 20 TJ of LNG would be sufficient to alleviate the forecast pressure breaches, on the basis that Longford's flow rate was not going to improve.
27 May 2019 16.37 hrs	Longford contact AEMO	Longford advised AEMO that the Longford flow rates would come back up but unsure when that would occur. AEMO informed Longford of the criticality of up-to-date information given the modelling indicated LNG would be required to prevent pressure breaches. Longford was unable to provide any additional information.
27 May 2019 16.46 hrs	AEMO contact APA	AEMO provided APA with an update advising it was likely LNG would be scheduled.
27 May 2019 16.53 hrs	Market Notice issued	AEMO issued a System Wide Notice (SWN) seeking a market response to a threat to system security as a result of a gas supply resource incident resulting in a potential breach of the pressure at DCG.
27 May 2019 17.20 hrs	AEMO contact Longford	Longford indicated they would deliver 95% of nominations by the end of the gas day. AEMO informed Longford this would not resolve the pressure breach at DCG Inlet and AEMO would likely schedule LNG to avoid breaching pressure at DCG Inlet. The cumulative deviation from Longford at this point was 30 TJ.
27 May 2019 17.21 hrs	AEMO produce schedule	The 6.00 pm schedule was produced, including the injection of 20 TJ of LNG.
27 May 2019 17.31 hrs	Longford notifies of SDPC	Longford informed AEMO of an SDPC constraining the daily volume to 700 TJ.
27 May 2019 17.38 hrs	Market notice issued	AEMO issued a SWN indicating an Operating Schedule constraint was applied to Dandenong LNG injection meter for 20 TJ to be injected, in response to a threat to system security, in the 6.00 pm to 10.00 pm scheduling interval.
27 May 2019 17.40 hrs	AEMO contact APA	AEMO advised APA 20 TJ of LNG had been scheduled.
27 May 2019 17.42 hrs	AEMO approve schedule	The 6.00 pm schedule was approved.

Date/Time (AEST)	Event/Action	Details
27 May 2019 18.44 hrs	AEMO contact Jemena	AEMO contacted Jemena Control Room (Jemena) with regards to alarms indicating low odorant at VicHub and TasHub. Jemena confirmed that low odorant reading at VicHub and TasHub were inaccurate due to a Longford compressor trip on EGP. The compressor trip resulted in gas being redirected from the EGP into the DTS. This resulted in an improvement in the Sale City Gate pressure.
27 May 2019 20.14 hrs	AEMO contact Longford	AEMO contacted Longford to request an update. Longford informed AEMO that they are intending to get back on schedule but are unable to provide AEMO a firm answer. AEMO requested for more information regarding the timeframe but Longford was unable to provide any timeframe.
27 May 2019 20.21 hrs	AEMO contact Longford	AEMO contacted Longford to discuss the Longford injection for the gas day. Longford confirmed the earlier SDPC of 700 TJ.
27 May 2019 20.23 hrs	Jemena contact AEMO	Jemena informed AEMO that the Longford compressors were back online, resulting in gas flowing back into EGP.
27 May 2019 20.35 hrs	AEMO applies SDPC	AEMO applied the 700 TJ SDPC at Longford injection meter, to apply in the 10.00 pm to 6.00 am scheduling interval.
27 May 2019 21.25 hrs	Market Notice issued	AEMO sent out a SWN stating that the threat to system security had ended, and no further LNG was scheduled in the 10.00 p m to the end of the gas day scheduling interval.