

STTM EVENT: CONTINGENCY GAS TRIGGER – GAS DAY 10 NOVEMBER 2016 AT SYDNEY HUB

PREPARED BY: Gas Market Monitoring

DOCUMENT REF: STTM ER 16/005

VERSION: 1.0

DATE: 15 December 2016

FINAL

Important Notice

Purpose

AEMO has prepared this report in accordance with rule 497 of the National Gas Rules (Rules), using information available as at the date of the report, unless otherwise specified.

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Glossary

Terms or Abbreviations	Explanation
AEMO	Australian Energy Market Operator
AEST	Australian Eastern Standard Time
APA	APA Group
CG	Contingency gas
DWGM	Declared Wholesale Gas Market
EGP	Eastern Gas Pipeline
FO	STTM Facility Operators
Jemena	Jemena Eastern Gas Pipeline
JGN	Jemena Gas Networks (NSW)
MIS	Market Information System
MOS	Market Operator Services
MSP	Moomba to Sydney Pipeline
NGR	National Gas Rules
NGS	Newcastle Gas Storage Facility
ROS	Rosalind Park Production Facility (Camden)
STTM	Short Term Trading Market
TJ	Terajoule

1 Summary and purpose

At 1813 hrs AEST on 9 November 2016, Jemena EGP (Jemena) advised AEMO that it believed a Contingency Gas (CG) trigger event would occur for gas day 10 November 2016. A compressor issue on the Eastern Gas Pipeline (EGP) was expected to impact the ability to meet Jemena's normal seasonal levels of daily delivery capacity to the Sydney hub. Jemena estimated there would be a 16 TJ delivery shortfall into the Sydney hub for gas day 10 November 2016.

The linepack status of EGP on the AEMO Gas Bulletin Board (GBB) for 10 November 2016 was changed by Jemena to "Red" (indicating involuntary curtailment of 'firm' load was likely or was happening on that gas day). The status was reinstated to "Green" (indicating pipeline capacity and linepack was adequate to meet demand on the gas day) for 11 November 2016.

In accordance with the National Gas Rules (NGR), on 9 November 2016, AEMO convened a CG Assessment Conference to assess the likely impact of the CG trigger event, and determine the nature and timing of appropriate responses.

At the Assessment Conference, AEMO determined and then informed the market that no CG was required for gas day 10 November 2016.

At 2207 hrs AEST on 9 November 2016, AEMO notified the market that the CG event was closed. As no CG was scheduled, there are no CG price impacts to report.

2 Background

2.1 Event reporting requirements

Rule 497 of the NGR requires AEMO to publish a report within 30 business days after the conclusion of a reviewable event. The report must include:

- A description of the reviewable event.
- AEMO's assessment of:
 - The actions taken by Trading Participants, STTM facility operators, STTM distributors and AEMO in relation to the reviewable event.
 - The effect of the reviewable event on the operation of the STTM.
 - Whether the provisions of Part 20 of the NGR (the rules relating to the STTM) were adequate to address the reviewable event.
 - Any other matter AEMO considers relevant.

In this instance, there was a compressor issue that was expected to impact the ability of Eastern Gas Pipeline to meet the normal seasonal levels of daily delivery capacity to the Sydney hub. This constitutes a CG trigger event, which is a reviewable event under Rule 440. Under Rule 497, AEMO's report of such an event must also include its reasons for not scheduling any price steps for the relevant hub on the relevant gas days that were either:

- Contained in CG offers and were below the high contingency gas price.
- Contained in CG bids and were above the low contingency gas price.

2.2 Review of Division 8 of the National Gas Rules

Rule 493 requires AEMO to review the operation of Division 8 of the NGR (Part 20, Division 8 of the NGR outlines the contingency gas arrangements for the STTM) after the first time contingency gas

is scheduled in respect of a contingency gas trigger event. AEMO must undertake the review in accordance with the extended consultative procedure outlined in rule 9A of the NGR.

As no contingency gas was scheduled in this instance, a review of Division 8 is not required.

2.3 Contingency gas process

The NGR and STTM Procedures define a process that AEMO, as the market operator, must facilitate and administer whereby contingency gas can be scheduled. Contingency gas is a mechanism for balancing supply and withdrawals at a hub when both the ex ante market and bilateral intraday pipeline flow variations are unable (or not expected to be able) to match supply and demand within or over a gas day. Contingency gas provides pipeline operators and distributors with a means of avoiding, or at least minimising, the need to involuntarily curtail shippers supplying the hub or users at the hub.

In the STTM, facility operators are responsible for operating their respective facilities. As such, the contingency gas process, and AEMO's decision-making about the need for contingency gas to be scheduled depends on input from Trading Participants and facility operators on supply/demand requirements as well as the physical operation and capabilities of the facilities on any given gas day. Therefore, the process by which contingency gas is scheduled is consultative, where AEMO assesses the situation and leads a discussion with the industry about what response is needed and what is possible.

The contingency gas process includes the following sub-processes:

1. Trigger Event
2. CG Assessment Conference
3. Industry Conference
4. Contingency Gas Determination
5. Confirmation of Contingency Gas bids and offers (if required)
6. Scheduling Contingency Gas (if required)
7. Notification Requirements.

Appendix A provides a summary of the contingency gas process.

3 Contingency gas trigger event

On 9 November 2016, Jemena notified AEMO that it believed a CG trigger event had occurred for gas day 10 November 2016 under NGR 440(1)(b). Rule 440(1)(b) relates to a forecast inability of an STTM facility to meet the normal seasonal levels of daily delivery capacity to the hub. The capacity reduction was due to compressor issues after maintenance. The compressor was not performing at its expected levels and was not delivering the required volumes to Sydney. Jemena estimated there would be a 16TJ delivery shortfall into the Sydney hub for gas day 10 November 2016.

4 Event description

On 7 November 2016, Longford compressor station maintenance resulted in expected pressure reductions on the Eastern Gas Pipeline (EGP).

From 7– 9 November 2016, the combination of Longford and Michelago compressor station planned maintenance resulted in unexpected pressure deterioration on the EGP over subsequent gas days.

9 November 2016 (All times are expressed in Australian Eastern Standard Time (AEST))

At 1400 hrs, Jemena conducted scheduling of the EGP for gas day 10 November 2016. The pipeline modelling performed after scheduling was completed revealed the need for curtailment to be applied for gas day 10 November 2016.

Jemena applied curtailment to its STTM services on the EGP totalling 16TJ when scheduling for gas day 10 November.

At 1700 hrs, Jemena updated the EGP Linepack Capacity Adequacy Flag on the Gas Bulletin Board to “RED” for gas day 10 November 2016, and reduced the Short Term Capacity Outlook from 315TJ to 290TJ.

At 1756 hrs, Jemena contacted AEMO to provide initial information on the event.

At 1813 hrs, AEMO called Jemena EGP to obtain additional details. Consequently, Jemena advised that it believed a CG event trigger event had occurred for gas day 10 November 2016.

Following Jemena’s advice, in accordance with the NGR, AEMO began the CG process by publishing a notice of the occurrence of the CG trigger event and convened an assessment conference.

The CG assessment conference was held at 1945 hrs on 9 November 2016 with AEMO, the STTM Facility Operators (FO), and STTM distributor. At the conference, Jemena advised that all scheduled quantities for gas day 9 November would be delivered and that it had advised its shippers it was unable to deliver all scheduled quantities for gas day 10 November 2016. Jemena advised there was a need to curtail 16TJ of total EGP STTM nominations received and it had advised its shippers.

APA advised that they had already received 8TJ of renomination above the STTM ex-ante schedule for gas day 10 November 2016 and they had sufficient usable linepack to cover any shortfall if required.

AGL advised that Rosalind Park Production Facility was flowing as per the schedule and that Newcastle Gas Storage was liquefying gas at the time. If required the facility could stop liquefying and turn around to inject gas into the network within 6-7 hours.

Jemena Gas Networks (JGN) advised that the distribution network was not experiencing any abnormal demand and that existing pressures were healthy. With the existing and forecast flows there would be no forecast pressure issues within the Sydney hub or at any delivery points.

Based on information provided at the assessment conference, AEMO determined and notified the market at 22.07 hrs that no CG would be required at the Sydney Hub for gas day 10 November 2016. As AEMO considered that CG was not required in relation to the contingency gas trigger event an Industry Conference was not required.

5 AEMO's assessment

5.1 Actions taken by participants, facility operators, and AEMO

After the pipeline modelling revealed the need for curtailment to be applied for gas day 10 November 2016, Jemena contacted its shippers advising them that it was unable to deliver all scheduled quantities and curtailment was needed. Although Jemena had reduced deliveries to some facilities outside the hub, there was still a shortfall of 16 TJ to the Sydney STTM hub.

Jemena changed the linepack status on the GBB to “Red” and reduced the Short Term Capacity Outlook from 315 TJ to 290 TJ, and subsequently advised AEMO that it considered that a CG trigger event had occurred.

Since a trigger event for contingency gas had occurred as defined in Rule 440(1)(b), AEMO began the contingency gas process. The first activity was AEMO publishing a notice under Rule 441 that a trigger event had occurred. AEMO then followed up by convening a CG assessment conference in accordance with Rule 442.

At the assessment conference, Jemena advised that all scheduled quantities for gas day 9 November would be delivered and that they had already advised their shippers that Jemena will be unable to deliver all schedule quantities on gas day 10 November. APA advised that they had already received a nomination of 8 TJ on the Moomba to Sydney Pipeline (MSP) above the STTM ex-ante schedule for gas day 10 November 2016. APA also advised that they had 208TJ of usable linepack to cover any shortfall if required. All other facilities were tracking as per forecast with no foreseeable issues.

At the assessment conference AEMO determined that contingency gas would not be required. This was based on the projected shortfall of 8 TJ (after renominations on the Moomba to Sydney Pipeline (MSP)), the fact that EGP shippers had already been curtailed by Jemena and that APA advised there was 208TJ of usable linepack on MSP to cover any shortfall if required. As AEMO considered that CG was not required in relation to the contingency gas trigger event, an Industry Conference was not required.

All parties acted reasonably in considering the event and exploring options and alternatives to scheduling contingency gas. The potential supply shortfall was avoided by Jemena reducing deliveries outside the hub and informing their STTM Shippers of the incident. As a result, Trading Participants had the option to renominate supply from the EGP to MSP negating the need for contingency gas to be scheduled.

AEMO market communications operated as expected:

- MIS Report INT 666 - Market Notice Report was published advising that a contingency gas trigger event had occurred and the outcome of the contingency gas determination. The determination was also published on the AEMO website.¹
- SMS messages and/or emails were also sent to participants advising them of the market notice content.

Whispir messaging service was used to advise (via email and SMS) contingency gas contact(s) of the FOs and distributor of the CG assessment conference.

5.2 The effect of the reviewable event on the operation of the STTM

As there was no contingency gas scheduled, there are no market pricing impacts to report for 10 November 2016.

Market impacts resulting from differences in renominations from reductions on EGP compared to increases on other facilities are not discernible for this event. This is due to the large forecast demand error which resulted in the market being long by approximately 64TJ. Shippers reduced

¹ The contingency gas determination can be found at: http://www.aemo.com.au/Gas/Short-Term-Trading-Market-STTM/Market-operations/Contingency_Gas.

nominations on both EGP and MSP on 10 November when they became aware of the forecast demand error.

5.3 Whether the provisions of Part 20 of the NGR were adequate to address the reviewable event

In accordance with Division 8 of the NGR, the contingency gas process began as a result of a trigger event and ended with the CG assessment conference and subsequent notification that no contingency gas was required.

To the extent that the exercise of Division 8 was limited on this occasion, there is nothing to suggest that the provisions of Division 8, or Part 20 of the NGR more generally, are not adequate.

5.4 AEMO's reasons for not scheduling price steps within a contingency gas bid or offer

As no contingency gas was scheduled in this instance, this section is not applicable.

Appendix A: Summary of Contingency Gas Process

This section provides a high level summary of the contingency gas process. For further information, please refer to Part 20, Division 8 of the NGR and associated provisions in the STTM Procedures. AEMO's technical guide² also provides an overview of the contingency gas process.

- 1. Trigger Event:** The NGR prescribed four contingency gas trigger events (see rule 441). STTM facility operators, STTM distributors, STTM shippers, or STTM users must notify AEMO of trigger events they become aware of as soon as practicable. If AEMO is notified of a trigger event, or AEMO considers an event has occurred, AEMO issues a notice advising the market. The occurrence of a trigger event does not mean contingency gas will be scheduled. Rather, it triggers an assessment process which may or may not lead to contingency gas being scheduled. If required, AEMO will call on the contingency gas bids and contingency gas offers submitted the day before the gas day, until the requirement is met or until the available contingency gas is exhausted.
- 2. Assessment Conference:** If AEMO is notified of a trigger event, or AEMO considers an event has occurred, AEMO is required to convene a CG assessment conference with the relevant STTM distributor, STTM facility operators, and any other person whose attendance AEMO considers reasonably necessary. At the CG assessment conference, information about the trigger event is exchanged, and an assessment is made of the operational requirements for the STTM distribution network and STTM facilities for the affected gas days. An assessment is also made as to whether contingency gas is likely be needed, and if so, what quantity of contingency gas might be required, and the location and timing for delivery of that contingency gas.
- 3. Industry Conference:** If the CG assessment conference indicates that CG is required, AEMO can convene a wider industry conference to discuss the trigger event and possible responses to it. The outcomes of the CG assessment conference assessments will be available at this conference. Trading participants may discuss commercial response to the trigger event with AEMO. However, if AEMO considers contingency gas is urgently required, it may not have time to convene the industry conference before the time by which contingency gas needs to be called. In this case, AEMO may go straight to step 4.
- 4. Contingency Gas Determination:** Following the conferences, AEMO must determine the requirement for contingency gas, if any, based on the information provided to it. This will include the location and timing of when contingency gas will be required.
- 5. Confirmation of Contingency Gas bids and offers:** AEMO must carry out a confirmation process with trading participants who submitted contingency gas offers or bids, to confirm the actual quantity of contingency gas they expect to be able to provide within the required time. The available quantity may be more or less than the submission. The trading participant can update the total quantity available, but the offer or bid price steps cannot be changed. Price steps will be marked as unavailable if the available quantity is reduced, or the last price step will be extended if the available quantity is increased.
- 6. Scheduling Contingency Gas:** Subject to the information determined in step 5, AEMO then proceeds to schedule contingency gas. To rectify a supply shortfall, AEMO calls contingency gas offers in order of increasing cost. To rectify a supply surplus, AEMO calls contingency gas bids in order of decreasing price. Quantities called will not exceed the quantities confirmed in step 5. All contingency gas offers or bids called are recorded by AEMO for settlement purposes.
- 7.** AEMO continues to monitor the situation and liaise with participants until the situation is rectified. This response does not preclude the need for involuntary curtailment. AEMO may also request participants to reduce their response; however, this will be voluntary because responses may already be committed. If a provider is able to reduce its response, AEMO will issue scheduling instructions and reduce the quantity of contingency gas called for settlement purposes.

² Technical Guide to the STTM version 3.8, AEMO, 5 November 2015. Available on AEMO's website at: <http://aemo.com.au/Gas/Short-Term-Trading-Market-STTM>.

Appendix B: Detailed Chronology of the Contingency Gas Trigger Event

Gas day 9 November 2016

Comments from	Time (AEST) (approximate)	Event/Action
9 November 2016		
Jemena	1400 hrs	Jemena conducted scheduling of EGP for gas day 10 November 2016 and performed pipeline modelling after scheduling was completed. Pipeline modelling results revealed the need for curtailment to be applied for gas day 10 November 2016 due to unexpected pressure deterioration on the EGP as a result of the Longford and Michelago compressor station maintenance.
Jemena	1700 hrs	Jemena line pack status on Gas Bulletin Board changed to Red with comment “Mid Line Compressor Maintenance” and Short Term Capacity Outlook changed to 290TJ.
AEMO	1756 hrs	Jemena contacted AEMO CG phone to provide initial information.
AEMO	1759 hrs	AEMO gas control room called AEMO STTM on-call support
AEMO and Jemena	1813 hrs	AEMO STTM on-call support called Jemena to get additional details regarding the issue and discuss whether Jemena intended to initiate a CG trigger event. Jemena advised that they wished to trigger a CG event for gas day 10 November under National Gas Rules 440(1)(b).
AEMO	1844 hrs	AEMO STTM on-call support called Jemena to discuss timing of CG Assessment Conference (AC) and path forward.
AEMO	1918 hrs	AEMO notified all Sydney STTM Participants that a CG trigger event had occurred with a market notice via email and SMS. This notice included a typo for the month and date.
AEMO	1926 hrs	AEMO notified the STTM FO's and Distributor via Whispir messaging service (using SMS and email) that an AC would be held at 19:45.
AEMO	1945 hrs	Assessment Conference held: <ul style="list-style-type: none"> Jemena provided a summary of events and advised that its shippers were informed that Jemena would be unable to deliver all scheduled quantities for gas day 10 November 2016. APA advised that they had already received 8TJ of renominations above the STTM ex-ante schedule for gas day 10 November 2016 and that they had 208TJ of usable linepack to cover any shortfall if required. AGL advised that Camden was flowing as per the schedule and that Newcastle Gas Storage was liquefying gas. If required, the facility could stop liquefying and turn around to inject gas into the network within 6-7 hours. Jemena Gas networks advised that the distribution network was not experiencing any abnormal demand and that current pressures were healthy. With the current and forecast flows, there would be no forecast pressure issues within the Sydney hub or at any delivery points. The assessment conference identified that as some STTM Shippers had already renominated their flows into the hub, the current shortfall was less than 8TJ. AEMO determined that no CG would be required at the Sydney Hub for gas day 10 November 2016. As AEMO considered that CG was not required in relation to the contingency gas trigger event an Industry Conference was not required.
AEMO	2008 hrs	AEMO sent corrected market notice for CG Trigger Event to all STTM Sydney Participants to correct the month/date. Note: AEMO will work to develop formal notice templates to reduce errors and time spent



Comments from	Time (AEST) (approximate)	Event/Action
		preparing material for the CG determination publication.
AEMO	2207 hrs	AEMO notified the market, via a market notice and also via email and SMS, that contingency gas would not be required at SYD hub for gas day 10 November 2016 and published the CG determination on AEMO's website.
10 November 2016		
Jemena	Start of gas day	Jemena conducted pipeline modelling to reassess the conditions for the gas day. Pipeline modelling showed EGP's ability to support the original nominations received for the gas day. EGP shippers were contacted and advised of their ability to renominate back to their original nominations, should they choose to do so.