

STTM EVENT REPORT – GAS DAY 19 NOVEMBER 2012 – SYDNEY AND ADELAIDE HUBS

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FINAL

Contents

1	Summary	3
2	Description of Event	3
2.1	Background	3
2.2	Cause of the Event	3
2.3	Market Impacts	4
2.4	Estimated Financial Impact.....	4
3	Assessment of the Event	4
4	Resulting Actions	4
	APPENDIX A – Allocation data and the ex post imbalance price	5

Glossary

Terms or Abbreviations	Explanation
AEMO	Australian Energy Market Operator
AEST	Australian Eastern Standard Time
MIS	Market Information System
MOS	Market Operator Services
NGR	National Gas Rules
STTM	Short Term Trading Market

1 Summary

On 20 November 2012, AEMO's market systems experienced an extraordinary delay in completing data transfer of MOS step allocation data for gas day 19 November 2012 at the Sydney and Adelaide hubs. This resulted in AEMO substituting default allocations and producing provisional ex post imbalance prices for those hubs.

The reason for the extraordinary delay in completing the data transfer has not been identified but investigations are ongoing and include a review to minimise the likelihood of a reoccurrence.

AEMO considers the market impact of the event was minor because there were no impacts on trading participants resulting from using the provisional ex post imbalance price to calculate the cumulative price for the next gas day, or for prudential monitoring; and final settlement is based on the delayed ex post price (which was correctly calculated). The Brisbane hub was not affected by the event.

This report has been prepared under section 7.6 of the STTM Procedures to assess the actions taken by STTM facility operators and AEMO in relation to the event and the effect of the event on the operation of the STTM.

All references to time in the report refer to Australian Eastern Standard Time.

2 Description of Event

2.1 Background

In each STTM hub, gas is priced once before each gas day (the ex ante market price) and once after the gas day (the ex post imbalance price or, in this report, the ex post price). AEMO normally issues the ex post price before 1200 hrs for the Sydney and Adelaide hubs unless AEMO rejects any invalid data or if facility operators fail to submit facility allocation data by 1100 hrs – in which case a provisional ex post schedule is issued.

After successful submission, the allocation data is transferred between database tables via batch jobs at specific times and in sequential order. To determine the ex post price, the first allocation data transfer sequence occurs at 1100 hrs. Approximately 30 seconds later, a check¹ that there is a matching pair of facility allocation and MOS step allocation files for each STTM pipeline is performed. If not, default allocation data for that pipeline is used to determine the provisional ex post price.

2.2 Cause of the Event

The batch job transferring MOS step allocation data took 232 seconds (approximately 3.5 minutes) to complete for the Adelaide and Sydney hubs. This meant that when the check for a matching pair of facility allocation and MOS step allocation files was performed approximately 30 seconds later, none were found for any pipeline at Adelaide and Sydney. Therefore default allocations were used to determine the provisional ex post price.

The reason for the extraordinary delay in completing the data transfer has not been identified. The delay could not be repeated in tests conducted since. Analysis of the data transfer history since March 2010 has shown that the data transfer normally takes less than 2 seconds to complete (99.6%). There have only been two occasions when the transfer time was exceeded the 30 second window. The second occasion was on 3 November 2012 when the transfer took 36 seconds. In this case, the check for matching files started afterwards and the market systems correctly calculated the ex post price.

¹ For details refer to APPENDIX A – Allocation data and the ex post imbalance price.

2.3 Market Impacts

As a consequence of the delayed allocation data transfer, the market systems determined the need for a provisional ex post price.

The provisional and 'final' ex post prices were correctly² calculated and were – \$4.3800/GJ and \$4.0123/GJ respectively at Adelaide; and \$4.4805/GJ for both at Sydney. All related MIS reports published correctly.

Since the provisional ex post imbalance price was equal to the ex post imbalance price at Sydney, there were no impacts on trading participants resulting from using the provisional ex post imbalance price to calculate the cumulative price for the next gas day, or for prudential monitoring.

For Adelaide, the small difference in price (\$0.3677/GJ) had a non-material impact on prudential monitoring since there were no margin calls for any STTM participants which occurred from using the (higher) provisional price. The cumulative price published for the next gas day correctly used the provisional ex post imbalance price, was below the cumulative price threshold (ie. \$29.8968/GJ compared to \$440/GJ) and therefore did not trigger an administered price cap state. The cumulative price was recalculated after the delayed ex post price was published and used for subsequent days. In this instance there was no difference in the two cumulative price outcomes.

STTM pipeline operators were incorrectly notified via email after 1100hrs that they had not submitted valid MOS step allocation files which resulted in calls to AEMO to confirm that the issue was with AEMO's market systems.

The main market impact is from uncertainty among STTM participants about the reliability of AEMO's market systems.

AEMO is not aware of any participant otherwise impacted by this event.

2.4 Estimated Financial Impact

There are no financial impacts since settlement is based on the 'final' ex post price.

3 Assessment of the Event

AEMO's assessment is that STTM facility operators did not contribute to the event and all data required was correctly supplied to AEMO.

While the extraordinary delay in completing the data transfer caused the triggering of the provisional/delayed ex post prices, the market systems otherwise operated as expected.

4 Resulting Actions

AEMO will conduct a review of the STTM market systems covering:

- the timing of data transfer batch jobs with the intent of reducing the likelihood of conflicting completion times (planned to be completed by mid-February 2013 – participants will be updated when completed); and
- the potential additional system tools for tracking and improving debugging (subject to assessment of suitable tools, planned for Q1 2013).

² Rule 426(2) requires AEMO to determine the ex post imbalance price in accordance with the STTM Procedures. Clause 7.2.1D of the STTM Procedures sets out the inputs to the ex post price calculation and Clause 7.2.1E sets out the inputs to the provisional ex post price calculation.

APPENDIX A – Allocation data and the ex post imbalance price

By 4.5 hours after the start of each gas day, the allocation agent for the relevant STTM facility is required to submit the STTM facility allocation for the previous gas day. The gas day starts at 6:30am at the Sydney and Adelaide hubs, and 8:00am for the Brisbane hub.

The STTM facility allocations provide AEMO with the final delivered quantity of gas for the relevant gas day. The STTM facility allocations are used as an input into the calculation of the ex post imbalance price for the gas day in question. The ex post imbalance price is one of the prices used to determine a trading participant's deviation payment or charge.

If the STTM facility allocations are not submitted by 4.5 hours after the start of the gas day, an extended period is made available for the allocation agent to deliver the STTM facility allocations for the relevant facility by 8.5 hours after the start of the gas day.

If the STTM facility allocations are not submitted by 8.5 hours after the start of the gas day, AEMO will use default allocations for the relevant facility to generate the ex post imbalance price by 9.5 hours after the start of the gas day.

For any STTM pipeline, the daily STTM facility allocation notice consists of two files, a facility allocation file and a market operator service (MOS) step allocation file (also known³ as the PAD and MSD files respectively). For each STTM facility allocation notice, the PAD file is required to be submitted before the MSD file and the two files are typically submitted a few minutes apart by the pipeline operators. Validations by the AEMO STTM systems are performed as follows:

- *Individual PAD and MSD validations*—validations are performed individually on the facility allocations (PAD) and MOS step allocation file (MSD) for each pipeline facility at the time the pipeline operator submits each file;
- *The PAD/MSD matching check*—a validation is run to check that the total MOS quantities (excluding overrun MOS) in both the facility allocation file and MOS step allocation file for each pipeline match. This is run at the time the MOS step allocation file is submitted. The MSD submission is rejected if it fails this test.
- *The PAD/MSD cut-off check*—in case the PAD and MSD sequence⁴ is not followed, the STTM system also performs a daily check, at the D+1⁵ allocation submission cut-off time, that there is a valid matching pair of facility allocations and MOS step allocation files for each STTM pipeline. Accordingly, this is required to be run at 11:00am for the Sydney and Adelaide hubs and 12:30pm for the Brisbane hub. In the absence of a matching pair of valid allocation files, default allocations for the relevant STTM pipeline are applied and used as an input into the calculation of the provisional or ex post imbalance price.

As far as the NGR and STTM Procedures are concerned these two files are treated as one allocation notice and neither can be considered to be validly submitted without the other.

³ Refer to STTM participant build pack and STTM participant build pack business validations addendum.

⁴ For example, a second PAD file could be submitted which doesn't match the first MSD file.

⁵ D+1 refers to the day after the respective gas day D.