



Important notice

Purpose

AEMO has prepared this report pursuant to Section 7.6 of the STTM Procedures, and Version 61 of the National Gas Rules (NGR), unless otherwise specified.

Disclaimer

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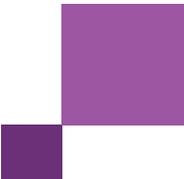
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Contents

1	Event Summary	1
2	Assessment of event	1
2.1	Cause of the IT Issue	1
2.2	Actions taken by Participants and AEMO	1
2.3	Adequacy of Part 20 of the NGR	2
2.4	Market Impacts	3
3	Conclusion	3
A1.	Chronology	4



1 Event Summary

On 5 June 2022, the AEMO's STTM market systems were subject to an IT event that caused some file submissions not to be accepted - notably the PAD/MSD and FHC files. As a result, many files submitted from 04.00 to 09.30 hrs AEST on 5 June 2022 via SWEXIE were incorrectly rejected by AEMO's IT system.

At 9.35 hrs, AEMO requested all files be resubmitted by participants, either manually or automatically, so they could be validated by 10.30 hrs AEST for use in the Ex Post Schedule for gas day 4 June 2022. All files were validated correctly except for Epic Energy allocation data.

However, as the original Epic Energy information (submitted at ~8:40 AM AEST) had been incorrectly rejected by AEMO and the resubmission was not successful, AEMO was unable to publish the ex post imbalance price for the Adelaide hub for gas day 4 June by the cut off time of 11.30 hrs on 5 June.

For this reason, an administered ex post pricing state was applied to the Adelaide STTM hub for gas day 4 June as per NGR 429. The PAD/MSD allocation data from Epic Energy was successfully submitted at 11.35 hrs, just after the cut off time.

This report is published in accordance with NGR 497(2)(a), a reviewable event and Section 7.6 of the STTM Procedures to assess the effect of the event on the operation of the STTM. All times in this report are AEST.

2 Assessment of event

2.1 Cause of the IT Issue

AEMO experienced corruption of a database during the morning of 5 June 2022 that caused performance on the central data transfer server to stall when the nightly data back-up process started. The disruption created gaps in key data being transferred to the downstream STTM database, resulting in the participant data being rejected.

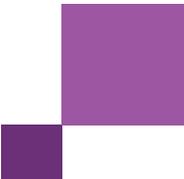
The exact cause of the database corruption is still unknown. The post-event IT investigation identified a number of potential causes and additional monitoring has been put in place to prevent a recurrence.

2.2 Actions taken by Participants and AEMO

The event was caused by an AEMO IT issue and did not result from any actions by STTM facility operators. The required information was provided to AEMO by the market cut off time, however due to issues within AEMO's IT systems this information was incorrectly rejected.

AEMO responded promptly to calls from STTM Facility Operators who noticed their allocation data was being rejected and began working to rectify the issue. Once the data within the AEMO IT systems were corrected, AEMO issued a market notice requesting participants to resubmit their files. Unfortunately, Epic Energy was unable to resubmit the PAD/MSD data in the timeframe available. AEMO sought further information from Epic Energy around the issues they experienced and was informed that a technical issue was encountered in the manual process of resubmitting the data. Epic Energy has informed AEMO that it has since revised its manual submission process to prevent the issue from reoccurring.

AEMO acknowledges the Traditional Owners of country throughout Australia and recognises their continuing connection to land, waters and culture. We pay respect to Elders past, present and emerging.



AEMO determined that an administered ex post pricing state applied for the gas day 4 June 2022 at the Adelaide hub due to the ex post imbalance price not being published by the cut off at 11.30 hrs due to an AEMO IT systems failure. Participants were notified by market notice of the Administered Ex Post Pricing State.

2.3 Adequacy of Part 20 of the NGR

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

- NGR 419 STTM facility allocations
- NGR 426 Ex post imbalance price
- NGR 429 Administered ex post pricing state

2.3.1 STTM facility allocations

NGR 419 requires the allocations for an STTM facility to be provided to AEMO for the preceding gas day. When this information is not provided, AEMO will notify the market and publish a provisional ex post price with a delayed ex post price to run four hours later. In the situation where the information is not provided within this extended window, default values or substitute information will be used in accordance with the STTM Procedures.

For this event, substitute information could not be used as the allocation notice from Epic Energy had been incorrectly rejected by AEMO. While the STTM Procedures gives AEMO the opportunity to report against NGR 419 where facility information is not provided or fails validation, in this event the criterion has not been satisfied.

2.3.2 Ex post imbalance price

NGR 426 requires AEMO to make the ex post imbalance price for a gas day for each hub available no later than 5.5 hours after the start of the following gas day to Trading Participants, and must publish the ex post imbalance price as soon as practicable.

When AEMO's IT system failed to validate allocation data on 5 June 2022, AEMO requested all information to be re-submitted to AEMO for validation. All re-submitted information had been validated except data from Epic Energy. For AEMO to determine the ex post imbalance price, AEMO must have all information provided as per NGR 419. This missing data resulted in the ex post imbalance price for gas day 4 June to not being published. As AEMO did not publish the ex post imbalance price by 11.30 hrs, this required the application of an administered ex post pricing state at the Adelaide hub for gas day 4 June 2022 as per NGR 429.

If no information is provided, due to a STTM Facility Operator IT issue, AEMO can delay the publication of the ex post imbalance price. This allowance however does not exist if AEMO has the IT issue.

In this event, while Epic Energy had previously provided the information, AEMO's IT systems had incorrectly rejected the data. Therefore, without the re-submitted information from Epic Energy, under NGR 429, AEMO was unable to publish the ex post imbalance price for Adelaide hub for gas day 4 June 2022.

2.3.3 Administered ex post pricing state

Under NGR 429, AEMO must determine that an administered ex post pricing state applied at the Adelaide hub for gas day 4 June 2022 due to AEMO not publishing the ex post imbalance price by 11.30 hrs due to AEMO's IT systems failure.

The ex post price is set according to NGR 429(2) as being equal to the lesser of the ex ante market price (\$43.0011/GJ) for that hub and gas day, and the administered price cap (\$40.0000/GJ), which resulted in an ex post price of \$40.0000/GJ.

As required by NGR 429(3), this administered ex post pricing state applied to the Adelaide hub for the entire gas day 4 June 2022.

2.4 Market Impacts

The market price outcomes for the gas day are outlined in Table 1 below.

Table 1: Adelaide Hub prices for gas day 4 June

Schedule	Price
Ex Ante Schedule	\$43.0011/GJ
Administered Ex Post	\$40.0000/GJ
Ex Post Schedule*	\$42.0089/GJ

* Calculated after the event

The administered ex post schedule price was \$2.0089/GJ lower than it would have otherwise been as a result of the application of the Administered Price Cap (due to the ex ante price being above \$40/GJ).

3 Conclusion

AEMO's IT system failed to validate ex-post data submissions correctly on 5 June 2022. While AEMO was able to rectify the IT issue that caused the data rejections, not all files were re-submitted by the required time. Epic Energy were unable to successfully re-submit their data. AEMO's failure to publish the ex post imbalance price by 11.30 hrs due to an AEMO IT systems failure resulted in an administered ex post pricing state being applied at the Adelaide hub for gas day 4 June 2022 as per NGR 429.

AEMO has considered that:

- All actions taken by AEMO during this event were consistent with the Rule and Procedure requirements.
- AEMO has investigated the IT issue that caused the event and has identified process improvements that are expected to mitigate the likelihood of a future event occurring.

AEMO believes that the rules were adequate in addressing the event but is also of the view that there may be opportunities for further improvement. Feedback from participants on the application of the ex post administered market state would be welcome.

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

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A1. Chronology

Chronology of events for 5 June 2022.

Time (AEST)	Activity	Details
07:12	Facility Operator calls AEMO	AEMO's Support Hub receives the first participant call stating there was a problem submitting files to AEMO's STTM Market Systems.
07:16	AEMO Investigation Starts	AEMO Business and IT on-call staff contacted and begin to investigate incident. Issue with data identified in database.
07:44	AEMO calls STTM Facility Operators	AEMO starts to call Facility Operators to confirm that there is an issue with AEMO's IT System preventing the validation of files and that the investigation is ongoing.
09:05	AEMO sends market notice	"STTM: AEMO has an IT issue in the STTM market systems. Market systems may not accept data from participant between 04:00 to 09:00 AEST on 5 June 2022. AEMO will send out a separate notice requesting participants resubmit data (including facility operator's FHC, PAD, MSD data), that must be submitted during this time period. Please review your STTM data submissions and be prepared to resubmit STTM data."
09:24	IT fix implemented	AEMO IT confirms all data has been corrected.
09:30	AEMO sends out IT Incident Notification	AEMO Support Hub sends out an IT Incident Notification to both internal and external on the STTM IT Issue with the for the STTM issue.
09:31	AEMO calls STTM Facility Operators	AEMO starts to call Facility Operators to request resubmission of data (PAD/MSD/FHC).
09:44	AEMO sends market notice	"STTM: AEMO had an IT issue in the STTM market systems. Market systems may not have accepted data from participant between 04:00 to 09:30 AEST on 5 June 2022. Please review and resubmit your STTM data submissions for this time period."
09:55	AEMO monitoring submissions	AEMO notes all facility operators with the exception of Epic Energy have resubmitted data (PAD/MSD/FHC) for gas day. AEMO calls Epic Energy.
09:56	AEMO sends out IT Incident Notification Update	AEMO Support Hub sends out a notification to both internal and external to inform that the STTM service has been restored.
10:30	Schedule Run	Ex Post schedule runs. Provisional Ex Post Schedule produced for Adelaide Hub as PAD/MSD files not submitted by Epic Energy.
10:52	Schedule Disapproved	Adelaide ex post for GD 4 June disapproved
11:05	ADL Hub Administered	AEMO administers ADL hub under Administered Ex Post State for GD 4 June 2022. Market notice sent: "Under the NGR 429, AEMO has determined that an Administered Ex Post Pricing State applies at the Adelaide hub for gas day 04/06/22. This Administered Ex Post Pricing State has resulted from a failure to publish the ex post schedule at 11:30 AEST for gas day 04/06/22 due to AEMO's IT systems failure. The ex post price is set equal to the lesser of the ex ante and the Administered Price Cap, resulting in an ex post price of \$40.0000/GJ. The Administered Ex Post Pricing State for the hub applies for the entire gas day. AEMO is investigating the issue and the market will be updated with any developments. No further schedules will be administered."