Independent Market Operator

EXTERNAL MARKET INCIDENT REPORT - STEM SUSPENSION 28 SEPTEMBER 2006

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Introduction

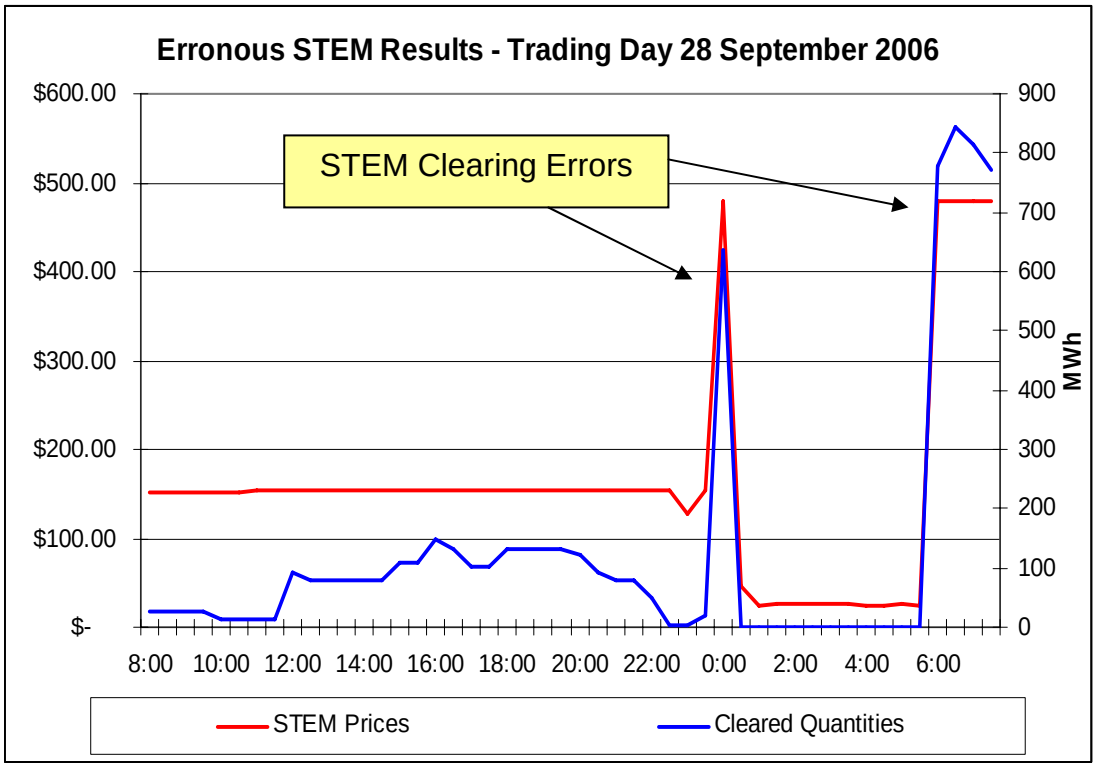
On September 27 2006 the IMO suspended the Short Term Energy Market (STEM) due to irregularities that were identified in the STEM auction results for Trading Day 28 September 2006. The purpose of this report is to:

- Explain the calculation error that led to the suspension;
- Inform participants of the actions that are being undertaken to correct the error and minimise the probability of recurrence of similar errors; and
- Propose changes to systems and processes to improve the management of STEM suspensions by the Market Operations Team

The Issue

Participants submit bids to purchase energy from, and offers to sell energy to the STEM between 09:00 and 09:50 each scheduling day. These bids and offers consist of paired price and quantity values that indicate the prices at which participants are willing to buy or sell the relevant quantities energy.

On September 27 2006, a STEM offer was submitted by a participant that included a segment with a positive price but a zero quantity. This input scenario had not been previously experienced, either operationally or in test mode. The STEM clearing process failed during intervals when it was attempting to use this zero quantity segment to set the price. The resulting errors are evident in the chart below.



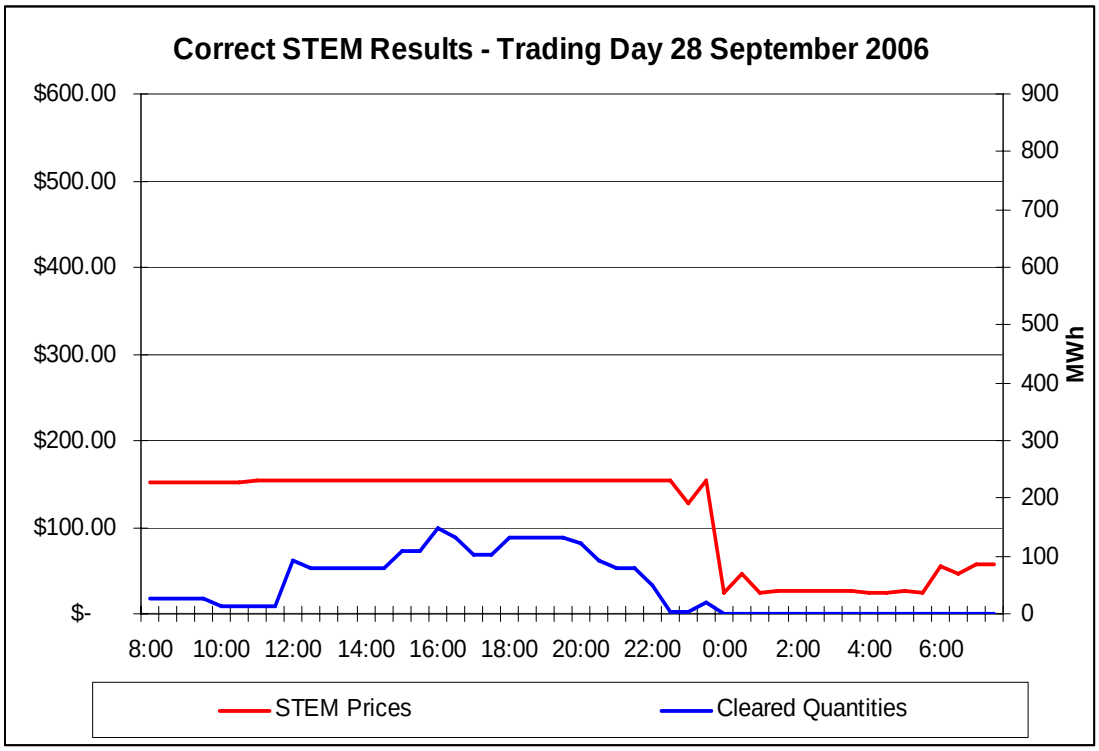
Operational Actions Taken

STEM results are examined by the Market Operations Duty Operator as a matter of course when the STEM auction runs at 10:00am. As a result, the errors discussed above were identified immediately. IMO management were informed of this incident and investigations were commenced with the Wholesale Electricity Market System (WEMS) vendor.

When it became evident that this issue could not be resolved under the timing required in the Rules, the STEM was suspended.

When the STEM is run, the cleared STEM quantities are added to each participant's net bilateral position to determine their Net Contract Position (NCP). This NCP is then used to validate resource plans as these are submitted. Although the STEM results from the original run were clearly incorrect, these were still used to determine the NCPs for each participant. Therefore, the error carried through to these contract positions. This resulted in a difficulty for participants entering their resource plans which had to be resolved before the operational day could be progressed.

At approximately 11:30 the issue of the zero quantity offer segment was uncovered. Removal of the segment from the database allowed the STEM Auction process to be rerun and the correct results produced (including the correct NCPs). The correct STEM outputs are graphed below:



Once the correct NCPs had been determined and published participants with STEM cleared quantities were contacted at approximately midday and

requested to submit their resource plans to meet these NCPs. Although all were successfully submitted, the resource plan window closing time had to be extended to 15:00 as outlined in the Operational Contingency Procedures.

Commercial Effects

When suspended there is no energy cleared through the STEM. All energy produced or consumed in deviation to the net bilateral position is settled through the balancing market. However, when the STEM is suspended there are no penalties applied to the balancing market – all balancing energy is settled at MCAP.

Under normal processes MCAP is determined as:

- The STEM price if the operational load is within a tolerance band of the net contract position; or
- A price determined by reconstructing the bid offer clearing process where the operational load is outside of the tolerance band.

This process also applies where the STEM is suspended but is subsequently successfully run before MCAP is calculated, as is the scenario in this case.

Therefore, provided the MCAP price is determined equal or close to the STEM price, transaction amounts resulting from the balancing market should be similar to the transaction amounts that would have resulted in the STEM had the correct STEM results been available and the market not suspended. The commercial effects of this STEM suspension should be minimal.

Findings and Recommendations

The following dot points outline the findings and recommendations arising from this incident:

- The underlying issue caused by the zero quantity supply segment has now been resolved in the market systems.

- Market Rules clause 6.4.3 requires that if the STEM is to be suspended this decision must be made by 10:30 AM. However, it is clear to the IMO that this leaves insufficient time to decide whether a STEM result is valid, or to resolve any issues that may have arisen. A Market Rule change proposal to extend this time will be proposed. This is also consistent with another recent change that provides the IMO with the ability to extend the resource plan submission window closing time.

- Changes to the WEMS have now been provided such that when the STEM is suspended:

- NCPs are set back to the net bilateral position of each market participant;
- Reports are amended to ensure that prices and STEM cleared quantities are not published with the STEM is suspended.

Conclusion

The STEM was suspended on 27 September 2006 for Trading Day 28 September 2006 due to an invalid STEM result. This was found to be due to a STEM offer segment of zero quantity in a participant's STEM offer. Urgent system changes were progressed to resolve this issue and minimise the chance of recurrence.

The commercial effects of this suspension event on participants should be minimal.

The IMO is committed to improve market systems and minimise the need for STEM suspension due to incidents such as this.

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