

**DETERMINATION OF THE MARKET SURVEILLANCE AND COMPLIANCE PANEL
MSCP/2008/D8**

Market Surveillance and Compliance Panel (“MSCP”)

Mr Thean Lip Ping, Chair
Professor Lim Chin
Mr Lee Keh Sai
Mr TPB Menon

Date of Determination

7 July 2008

Party

Energy Market Company Pte Ltd (“EMC”)

Subject

Failure to release the short-term schedule for period 8 and to publish the relevant information on time on 25 February 2008

Applicable Rule(s) in the Singapore Electricity Market Rules

1. Section 7.7.2A of Chapter 6

“Not later than 25 minutes prior to the commencement of the first dispatch period of the short-term schedule referred to in section 7.4A, the EMC shall, for each dispatch period included in the short-term schedule:

7.7.2A.1 release to the dispatch coordinator for each registered facility the projected schedules for energy, regulation and reserve, by reserve class, for that registered facility;

7.7.2A.2 publish the information described in section 7.7.3; and

7.7.2A.3 communicate to the PSO the projected schedules for energy, regulation and reserve, by reserve class, for each registered facility, together with the information described in section 7.7.3, in accordance with the system operation manual and any applicable market manual.”

2. Section 7.7.3 of Chapter 6

“In accordance with sections 7.7.1, 7.7.2 and 7.7.2A, the EMC shall publish the following information for each dispatch period and for each market outlook scenario, pre-dispatch schedule scenario and short-term schedule:

- 7.7.3.1 the projected total load;
- 7.7.3.2 the projected transmission losses;
- 7.7.3.3 total reserve requirements by reserve class;
- 7.7.3.4 total regulation requirements;
- 7.7.3.5 projected energy prices associated with each market network node at which a generation registered facility or generation settlement facility is located....;
- 7.7.3.6 the projected uniform Singapore energy price....;
- 7.7.3.7 projected reserve prices for each reserve class and reserve provider group....;
- 7.7.3.8 projected regulation prices....;
- 7.7.3.9 any predicted system energy shortfalls;
- 7.7.3.10 any predicted system reserve shortfalls, by reserve class;
- 7.7.3.11 any predicted system regulation shortfalls; and
- 7.7.3.12 a list of security constraints and generation fixing constraints applied.”

Facts and Circumstances

3. Energy Market Company (“EMC”) made a self-report on 11 March 2008 that the short-term schedule for period 8 on 25 February 2008 was sent late to the Power System Operator (“PSO”) and was not published by EMC according to the Singapore Electricity Market Rules (the “market rules”).
4. EMC said its investigation showed that a market clearing engine (MCE) query which extracted offer-related data from its database had slowed down. This slowed down the short-term schedule processing and resulted in the delay in the sending and publication of the short-term schedule. The query is run every period for the purpose of generating dispatch schedules.
5. EMC re-computed statistics from the tables used in the MCE query and this resolved the slowness issues immediately.
6. When the system was back to its stable state, EMC found that during the incident, some of the Oracle objects which were part of the query had contention on the memory blocks, i.e. there was a high concurrency of input/output to the same memory block.
7. Assistance was sought from Oracle support with regard to this slowness due to contention on the memory blocks. Oracle support has not confirmed the root cause. However, based on symptoms and data collected during the incident, Oracle recommended increasing concurrency control parameters to avoid this contention in future.
8. EMC said that it was not able to recreate the incident for study because it was related to the internal behaviour of the system. EMC further said that it had implemented Oracle’s recommendations in the test environment. It also planned to effect these changes in the Production System.
9. In addition, to prevent a recurrence of a similar incident, EMC had from 25 February 2008 analysed the affected tables on a daily basis.
10. As a result of the above incident, EMC failed to release the short-term schedule for period 8 and to publish the relevant information on 25 February 2008 within the deadline required under the market rules.

Determination

11. The MSCP had on 2 June 2008 sent a letter to EMC informing EMC that it was of the view that EMC was prima facie in breach of the market rules for the incident on 25 February 2008 and inviting EMC to make written representations.
12. On 16 June 2008, EMC submitted a letter with its written representations.
13. After taking into consideration the written representations submitted, the MSCP determined that EMC breached section 7.7.2A of Chapter 6 of the market rules.
14. However, the breach was self-reported, inadvertent, rectified quickly and did not have a significant impact on the wholesale electricity markets.
15. Therefore, the MSCP determined that the appropriate action to be taken was to issue a letter of non-compliance to EMC and to direct EMC to pay costs, fixed at \$1,000.00.



Thean Lip Ping
Chair, Market Surveillance and Compliance Panel