

**DETERMINATION OF THE MARKET SURVEILLANCE AND COMPLIANCE PANEL  
MSCP/2005/D10**

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**Market Surveillance and Compliance Panel ("MSCP")**

Mr Joseph Grimberg, Chair  
Professor Lim Chin  
Mr Lee Keh Sai  
Mr TPB Menon

**Date of Determination**

11 April 2005

**Party**

Energy Market Company Pte Ltd ("EMC")

**Subject**

Failure to determine and release short-term schedule and publish information for period 24 on 18 June 2004

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**Applicable Rule(s) in the Singapore Electricity Market Rules**

1. Section 7.4A.1 of Chapter 6 provides that:

"The EMC shall, in accordance with section 7.6 and Appendix 6A, determine a short-term schedule corresponding to the nodal load forecast described in section 7.2.1.1."

According to the market operations timetable in Appendix 6A, the EMC is required to commence computing the short-term schedule at T-4 minutes.

2. Section 7.7.2A of Chapter 6 provides that:

"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.”

3. Section 7.7.3 of Chapter 6 provides that:

“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**

- 4. According to the EMC, the short-term schedule for period 24 was not determined within the deadline stipulated in the market rules.
- 5. The market clearing engine MCE05 responsible for determining the short-term schedule for period 24 lost connection with the Oracle Database due to a technical problem. As a result, the MCE05 terminated unexpectedly in the course of processing the short-term schedule for period 24. The cause of the termination was due to insufficient memory resources in MCE05 (known as a “memory leak issue”).
- 6. Upon discovery of this problem, the EMC staff manually triggered the short-term dispatch run. The short-term schedule was produced, published and sent to the PSO after the stipulated deadline in the market rules.
- 7. To minimize and possibly prevent this “memory leak issue”, the EMC installed a patch in the EMC IT system to ensure that the market clearing engine process starts at every dispatch run and terminates after the dispatch run is completed. This will ensure that the memory resources in the market clearing engine are released after the completion of each dispatch run.
- 8. This incident did not have a significant impact on the wholesale electricity markets.

## Determination

9. On 25 November 2004, the MCSP issued a letter informing the EMC that it considered that the EMC had prima facie breached sections 7.4A.1 and 7.7.2A of Chapter 6 of the Singapore Electricity Market Rules (the "market rules") and invited the EMC to make written representations. No written representations were received by the deadline stipulated.
10. The MSCP determined on the basis of the facts referred to above that the EMC breached sections 7.4A.1 and 7.7.2A of Chapter 6 of the market rules.
11. However, the breach was self-reported, rectified quickly and without significant impact on the markets.
12. Therefore, the MSCP determined that the appropriate enforcement action to be taken was to issue a letter of non-compliance to the EMC and to direct the EMC to pay costs, fixed at \$1,000.



Joseph Grimberg  
Chair  
Market Surveillance and Compliance Panel