DETERMINATION OF THE MARKET SURVEILLANCE AND COMPLIANCE PANEL
MSCP/2004/D11

Market Surveillance and Compliance Panel ("MSCP")
Mr Joseph Grimberg, Chair
Professor Lim Chin
Mr Lee Keh Sai
Mr TPB Menon

Date of Determination
14 September 2004

Party
Energy Market Company Pte Ltd ("EMC")

Subject
Failure to determine and release schedules and publish information for period 28 on 15 September 2003

Applicable Rule(s) in the Singapore Electricity Market Rules

1. Section 9.2.1 of Chapter 6

    "The EMC shall, prior to the commencement of each dispatch period and in accordance with the market operations timetable, use the market clearing engine to determine for that dispatch period:

    9.2.1.1   a real-time dispatch schedule, containing schedules of energy, reserve and regulation for registered facilities, to be released to the PSO, which in accordance with section 9.1.2 of Chapter 5 shall be deemed to constitute the dispatch instructions issued by the PSO to the applicable dispatch coordinators unless and until further dispatch instructions are issued by the PSO to a given dispatch coordinator pursuant to section 9.1.3 of Chapter 5; and

    9.2.1.2   a real-time pricing schedule determined by the market clearing engine…including:

    - energy prices for each market network node;
    - the uniform Singapore electricity price;
    - reserve prices for each reserve class and for each reserve provider group; and
    - regulation prices."

    The market operations timetable under Appendix 6A of Chapter 6 provides for the EMC to begin computing a real-time dispatch schedule using the market clearing engine 5 minutes prior to the beginning of the dispatch period.

The market operations timetable under Appendix 6A of Chapter 6 provides for the EMC to release the real-time dispatch schedule to the PSO at least 30 seconds prior to the beginning of the dispatch period.

2. Section 9.2.3 of Chapter 6

"The EMC shall, in accordance with the market operations timetable, release to the dispatch coordinator for each registered facility a real-time dispatch schedule comprising that portion of the real-time dispatch schedule referred to in section 9.2.1.1 that describes the quantities of energy, reserve by reserve class and regulation scheduled in respect of that registered facility."

The market operations timetable under Appendix 6A of Chapter 6 provides for the EMC to release the real-time dispatch schedule and real-time pricing schedule at least 30 seconds prior to the beginning of the dispatch period.

3. Section 9.2.4 of Chapter 6

"The EMC shall, in accordance with the market operations timetable, publish the following information as it pertains to each dispatch period:

9.2.4.1   total load;
9.2.4.2   total transmission losses;
9.2.4.3   total reserve requirements by reserve class;
9.2.4.4   total regulation requirements;
9.2.4.5   energy prices associated with each market network node at which a generation registered facility or generation settlement facility is located…;
9.2.4.6   the uniform Singapore energy price…;
9.2.4.7   reserve prices for each reserve class and reserve provider group…;
9.2.4.8   regulation prices…;
9.2.4.9   any system energy shortfalls reported by the market clearing engine;
9.2.4.10 any system reserve shortfalls, by reserve class, reported by the market clearing engine;
9.2.4.11 any system regulation shortfalls reported by the market clearing engine; and
9.2.4.12 a list of security constraints and generation fixing constraints applied."

The market operations timetable under Appendix 6A of Chapter 6 provides that the EMC must issue the market information set out in section 9.2.4 of Chapter 6 at least 30 seconds prior to the beginning of the dispatch period.

Facts and Circumstances

4. This incident occurred during the release for the migration of the firewall management server in the EMC's IT system. There are 2 firewalls within the system: the primary firewall and secondary firewall. The primary firewall is the default used by the system and the secondary firewall would be activated if the primary firewall fails to work.

5. After the migration of the firewall management server, both the primary and secondary firewalls had to be initialized to it. The EMC's IT team first initialized the secondary firewall to the management server and when this was carried out successfully, switched the system from using the primary firewall to the secondary firewall so as to initialize the primary firewall to the management server.

6. After the switchover from the primary firewall to the secondary firewall, the primary firewall reacted abnormally to the switchover and rebooted itself. This caused the database to lose connection with the market clearing engine. As a result, the market clearing engine was unable to produce the dispatch schedule for period 28 automatically.

7. The IT team rebooted the firewall server and triggered the market clearing engine to initiate the period 28 dispatch run. The manual real-time dispatch schedule was produced 2 mins 7 secs after period 28 had commenced.

8. The EMC reported that the likely cause of this incident was a virtual memory error on the primary firewall. The vendor of the firewall has recommended that the EMC perform a reboot of the firewall every quarter to clear the virtual memory. The EMC has updated its IT procedural checklist to incorporate the quarterly reboot of the firewall server.

9. There was no significant impact resulting from this incident.

Determination

10. On 2 April 2004, the MCSP issued a letter informing the EMC that it considered that the EMC had prima facie breached sections 9.2.1, 9.2.3 and 9.2.4 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.

11. The MSCP determined on the basis of the facts referred to above that the EMC breached sections 9.2.1, 9.2.3 and 9.2.4 of Chapter 6 of the market rules.

12. However, the breach was self-reported and had no significant impact on the market. The EMC had taken remedial actions to prevent this incident from recurring. There was also no indication that the EMC had not made a reasonable attempt to comply with the market rules.

13. Therefore, the MSCP determined that the appropriate enforcement action to be taken is to issue a letter of non-compliance to the EMC and directs the EMC to pay costs, fixed at $1,000.
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Lim Chin
for and on behalf of
Chair, Market Surveillance and Compliance Panel