DETERMINATION OF THE MARKET SURVEILLANCE AND COMPLIANCE PANEL
MSCP/2005/D3

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

Date of Determination
4 January 2005

Party
Energy Market Company Pte Ltd ("EMC")

Subject
Failure to release schedules to the PSO for period 28 on 18 December 2003 and for period 34 on 19 December 2003
Failure to determine and release schedules and publish information for period 33 on 19 December 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 prior to 30 seconds before the commencement 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 to the dispatch coordinators prior to 30 seconds before the commencement 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 publish the market information set out in section 9.2.4 of Chapter 6 prior to 30 seconds before the commencement of the dispatch period.

Facts and Circumstances

Incident on 18 December 2003

4. The connectivity between the PSO and EMC systems could not be established on 18 December 2003 at around noon and as a result, the real-time dispatch schedule for period 28 could not be released to the PSO on time. The initial troubleshooting by the EMC focused on the new firewall patch that was released into the system an hour before the connectivity problem arose. However, the problem was not resolved even after the firewall patch was removed from the IT system.

5. The EMC then realized that the problem was likely to have been caused by a failure in the primary Arrowpoint application which balances the load between the two web servers in the system. The connection between the PSO and the EMC systems was restored after the EMC reconfigured the system to bypass the primary Arrowpoint software and to use only one web server instead of two web servers.

6. The EMC worked together with its software vendors to identify the root cause of the Arrowpoint application failure.

Incident on 19 December 2003

7. On 19 December 2003, the real-time dispatch run for period 33 failed to commence on time. The real-time dispatch run for period 34 was completed successfully but the real-time dispatch schedule was not released to the PSO on time.

8. Trouble-shooting by the EMC indicated that the bypassing of the primary Arrowpoint software on 18 December 2003 resulted in intermittent disconnectivity between the applications within the IT system. On 20 December 2003, the EMC decided to normalize the system setup for the IT system by restoring the use of the primary Arrowpoint software.

9. The incidents did not cause a significant impact on the wholesale electricity market.

Determination

10. On 14 September 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:

    a. section 9.2.1.1 of Chapter 6 of the market rules when it failed to release the real-time dispatch schedule to the PSO for period 28 on 18 December 2003 and period 34 on 19 December 2003; and

    b. sections 9.2.1, 9.2.3 and 9.2.4 of Chapter 6 of the market rules when it failed to determine and release schedules and publish information for period 33 on 19 December 2003

    within the deadlines required under the market rules.

12. However, the breaches were self-reported and had no significant impact on the market. 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 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