DETERMINATION OF THE MARKET SURVEILLANCE AND COMPLIANCE PANEL
MSCP/2006/D10

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

Date of Determination
24 August 2006

Party
Energy Market Company Pte Ltd ("EMC")

Subject
Failure to release and publish information on 1 June 2005 for
a. Real-time schedule for period 23 and
b. Short-term schedule for period 24

Applicable Rule(s) in the Singapore Electricity Market Rules

1. 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 prior to 30 seconds before the beginning of the dispatch period.

2. 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 beginning of the dispatch period.

3. 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."

4. 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

5. According to EMC, it failed to publish the real-time schedule for period 23 and short-term schedule for period 24 on 1 June 2005 in time on its Trading Website.

6. There are two aspects of WebLogic in the NEMS systems – internal and external. The internal aspect serves the market operator internal front end screens, whereas the external aspect serves all interfaces, such as the Trading Website, Application Programme Interface (API), offer submission and PSO Advisories.

7. On 1 June 2005, the routine restart of the WebLogic external process failed at 10:55 hrs due to the WebLogic application being in a "hung" state. To rectify the fault, EMC stopped the application and restarted the WebLogic external process again. The second restart worked successfully. Due to the failure of the external WebLogic, all external access to the NEMS system was affected and the Trading Website was completely unavailable. Internal access to the NEMS was not affected. As the proper functioning of the external WebLogic is necessary for users to view the web pages on the Trading Website and see the the dispatch schedules, the users were therefore unable to view the web pages at all and were therefore unable to see the Dispatch Schedules. However, the processes of generating dispatch schedules by the market clearing engine and sending them to the PSO were not affected and the PSO was able to dispatch energy during the relevant period according to the dispatch schedule.

8. EMC and its WebLogic vendor carried out detailed investigation on the failure of the external WebLogic application and found that the problem was caused by a bug in the WebLogic software. EMC mentioned in its self-report that its vendor had confirmed that its other customers had similar experiences with the failure of the software. The vendor indicated that a fix for this issue would be included in WebLogic version 8.1SP5 which was scheduled for release in October 2005. EMC also indicated that upon the release of the software fix by WebLogic, EMC would upgrade its WebLogic application.

9. EMC also mentioned that there was a possibility that the incident could be repeated until the bug was fixed in WebLogic version 8.1SP5. However, EMC had modified its scheduled restart of the WebLogic process so that this was performed manually during its scheduled monthly maintenance window. With this modification, any problems during the restart would occur during a scheduled maintenance window and would not adversely affect the NEMS IT systems.

10. This incident did not have a significant impact on the wholesale electricity markets.

Determinations

11. On 15 May 2006, the MSCP issued a letter informing the EMC that it considered that the EMC had prima facie breached sections 9.2.3 and 9.2.4, and 7.7.2A of Chapter 6 of the Singapore Electricity Market Rules (the 'market rules') for its failure to release and publish the real-time schedule for period 23 and short-term schedule for period 24 on 1 June 2005 within the deadline required under the market rules and invited EMC to make written representations.

12. On 18 May 2006, EMC submitted written representations to the MSCP.

13. In its written representations, EMC said that its investigation concluded that there was a software bug in the Weblogic of the IT system in NEMS that prevented the software from properly functioning during a start-up. According to EMC, its vendor has since released an update which addresses the bug. However, EMC had decided against just implementing the software updates due to the additional system risks that a major application update could cause to the NEMS IT system. In March 2006, EMC commenced a Server Re-platform Project for the NEMS system. As part of the project, the present Weblogic systems would be completely replaced with the most updated versions of the software. The Server Re-platform Project is due for completion by early 2007. This new schedule to implement the WebLogic software update is different from that EMC had proposed in its self-report dated 15 July 2005. At that time, EMC had proposed to implement the software update upon its release in October 2005. EMC apologized for failing to keep the MSCP updated on the matter.

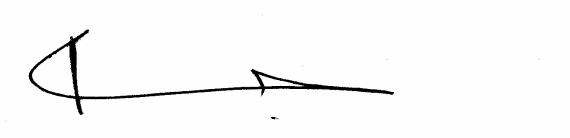
14. EMC also noted that the existing bug in the Weblogic software had not resurfaced, and EMC had been unable to reproduce the error during the extensive testing which followed the incident on 1 June 2005.

15. EMC said that it appreciated the necessity of ensuring the reliability of the EMC Trading Website and the importance of the NEMS trading system. It said that all efforts were made to ensure the smooth operation of the NEMS system. EMC trusted that the MSCP would be taking into consideration the inherent and unexpected problems that might have arisen with all IT systems and EMC would continue to endeavour to maintain the operational integrity of the Singapore Electricity Market.

16. The MSCP determined on the basis of the facts referred to above that the EMC breached sections 9.2.3 and 9.2.4 and 7.7.2A of chapter 6 of the market rules.

17. However, the breaches were self-reported, inadvertent, and without significant impact on the wholesale electricity markets. Remedial action was also being taken.

18. Therefore, the MSCP determined that it would 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