

**DETERMINATION OF THE MARKET SURVEILLANCE AND COMPLIANCE PANEL  
MSCP/2006/D2**

---

**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**

31 March 2006

**Party**

Energy Market Company Pte Ltd (“EMC”)

**Subject**

Failure to release and publish real-time schedules and short-term schedules on 15 September 2005

---

1. The Energy Market Company Pte Ltd (“EMC”) made a self-report on 12 October 2005 that on 15 September 2005 from 1051 hrs to 1132 hrs, market participants could not access its trading website and web offer submission was not possible although market participants were able to continue with the normal Powerbid offer submission process, or submit offers via the approved backup offer submission, using secured email. The impact was that market participants could not download data via the API (Application Programming Interface) although NEMS processing continued to be normal. As a result, EMC could be in breach of the market rules.

**APPLICABLE MARKET RULES**

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 in Appendix 6A of Chapter 6 provides that the EMC must release the real-time dispatch schedule to market participants 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 beginning of the dispatch period.

4. 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“.

5. 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:

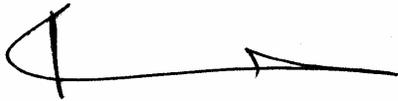
- 7.7.3.1 the projected total load;
- 7.7.3.2 the projected transmission losses;
- 7.7.3.3 total reserve requirements by reserve class;
- 7.7.3.4 total regulation requirements;
- 7.7.3.5 projected energy prices associated with each market network node at which a generation registered facility or generation 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.”

## INVESTIGATION FINDINGS

6. According to EMC, market participants could not access the EMC trading website from 1051 hrs to 1132 hrs on 15 September 2005. Market participants were not able to submit offers through web offering, but they were able to continue with the normal Powerbid offer submission process, or via the approved backup offer submission, using secured email.
7. According to EMC, the inaccessibility of the trading website was caused by a change made by EMC to the firewall policy that allowed access to the trading website. The change was made at a market participant's request to change its static Internet Protocol (IP) address to the dynamic Fully Qualified Domain Name Network (FQDN) address. Upon the occurrence of the problem, EMC “rolled back” the change, the original firewall policy was reinstated and accessibility to the trading website was re-established. To prevent a recurrence of the incident, EMC stated that it would in future test out any change in a development environment before implementing it in the production system.
8. During MAU's investigation, EMC further revealed that Powerbid offer was also not possible during the period. As the market participant could not gain access to the EMC trading website, the EMC would be considered to have failed to release and publish the following information on 15 September 2005:
  1. real-time schedules for periods 23 & 24; and
  2. short-term schedules for periods 24within the deadlines required under the market rules.
9. Based on the facts of the incident, it would appear that EMC had breached:
  - (a) sections 9.2.3 and 9.2.4 of chapter 6 of the market rules due to its failure to release real-time schedules to market participants and to publish information for periods 23 & 24 on 15 September 2005;
  - (b) section 7.7.2A of Chapter 6 of the market rules due to its failure to release a short-term schedule to market participants and publish information for period 24 on 15 September 2005within the deadlines required under the market rules.
10. Pursuant to section 7.2.3 of Chapter 3 of the market rules, MSCP on 8 February 2006 served a formal notice to EMC that it was prima facie of the view that EMC had breached sections 9.2.3, 9.2.4 and 7.7.2A of Chapter 6 of the market rules and invited EMC to make written representations to MSCP before it made its final determination, including, if thought fit, regarding enforcement action against EMC. In the notice, it was pointed out that EMC would have the right to request a hearing before the MSCP.
11. EMC submitted its written representations on 15 February 2006 to the MSCP.
12. In its written representations, EMC admitted the breach. It said that the cause of the breach was due to the failure of its staff to adhere to its proper internal system of change procedure. EMC considered any disruption to the NEMS system seriously. EMC further said that there was no malice by the staff who initiated the change to the firewall as it was his intention to provide an extra level of service at the request of a market participant. EMC said that steps had been taken to ensure that EMC's internal procedures were complied with and the staff that was responsible was internally disciplined.

13. EMC said that it would in future mitigate the risks of such an occurrence by ensuring that EMC personnel are regularly reminded of the importance of proper adherence to the internal release procedures and the market rules. EMC requested the MSCP to take into consideration that the disruption to the firewall and web service had minimal impact on the market. EMC also stated that it would continue to endeavour to ensure the reliability and smooth operation of the NEMS system.
14. Having considered the written representations from EMC, MSCP noted that EMC, being the market operator, has a key function in ensuring market integrity. Any problem relating to the discharge of the market operation function can give rise to a systemic risk in the market. There did not appear to be sufficient checks and balances in this case. It should have been standard practice to test out any change of the IT system in a development environment before implementation in the production system. While there was no significant market impact, MSCP considered that EMC had failed to exercise due diligence in this matter and the action of the EMC staff had posed a risk to the market.
15. MSCP therefore finds that EMC has breached sections 9.2.3, 9.2.4 and 7.7.2A of chapter 6 of the market rules and imposes a financial penalty of \$5,000 on EMC. In addition, MSCP orders the payment by EMC of costs in the sum of \$1,000.



Joseph Grimberg  
Chair  
Market Surveillance and Compliance Panel