

**DETERMINATION OF THE MARKET SURVEILLANCE AND COMPLIANCE PANEL
MSCP/2013/D6**

Market Surveillance and Compliance Panel ("MSCP")

Mr Thean Lip Ping, Chair
Professor Lim Chin
Mr Lee Keh Sai
Mr TPB Menon
Mr Philip Chua

Date of Determination

12 December 2013

Party

Energy Market Company Pte Ltd ("EMC")

Subject

Energy Market Company's failure to release real-time dispatch schedules to the Power System Operator on 1 August 2013

BACKGROUND

1. In the market clearing engine (MCE), there are three application jobs to produce and send a Real-Time Dispatch (RTS) file to the Power System Operator ("PSO"). The Market Clearing Engine Run (MCR) job will produce the market clearing results. The Auto Authorization (AA) job will then approve the completed MCR job, create the RTS file and write the contents of the market clearing results to the RTS file. The Dispatch Listener (DL) job will detect and send the completed RTS file to the PSO.
2. To mitigate the risk of failing the MCR job, EMC has a Backup MCR job and a Fail-Safe job to trigger any uncompleted MCR job for each trading period.

FACTS AND CIRCUMSTANCES

3. EMC submitted a self-report on 11 October 2013 that it had sent an empty Real-Time Dispatch (RTS) file to the PSO for period 39 on 1 August 2013.
4. At 18:59hrs on 1 August 2013, the PSO informed EMC that the RTS file it received from EMC for period 39 (starting 19:00hrs) was empty.
5. At that time, there was a connection problem between EMC and IBM for the Managed Security Services Project. The de-bugging feature in the network routers was turned on for the first time to assist in the monitoring of the network events as troubleshooting of a network configuration issue was carried out between 18:34hrs and 19:12hrs.

6. EMC postulated that the turning on of the network debugging feature could have adversely affected the performance of the network routers and caused the database connectivity issue from 18:51hrs to 19:12hrs on 1 August 2013.
7. As a result of the database connectivity issue, the MCR job at 18:55hrs and the Backup MCR job at 18:57hrs were not processed. The Fail-Safe job at 18:57:30hrs triggered and completed the MCR job and Backup MCR job. The AA job approved and created the same RTS file name for both jobs at 18:57:15hrs.
8. EMC postulated that the DL job could have detected the first completed RTS file, but sent the second RTS file to the PSO before the market clearing results were written to it.
9. Two identical RTS files were published on the National Electricity Market of Singapore (NEMS) trading website for period 39 on 1 August 2013.
10. EMC then removed the duplicate RTS file from the NEMS trading website on 1 August 2013. Market participants were updated via email on the duplicate RTS file situation.
11. EMC's contractors, IBM and Oracle technical support did not identify any error in the log files relating to the database connectivity issue.
12. EMC was unable to determine the exact cause of the database connectivity issue that resulted in the failure of the MCR job and backup MCR job. However, it has stopped the usage of the network debugging feature. It will monitor network events with other tools which are less intrusive towards the performance of the network routers.
13. EMC said it is looking into an improvement to the present system where the Fail-Safe job will only trigger one of the failed MCR jobs.
14. The PSO was the only party that did not receive RTS information from EMC for period 39 on 1 August 2013 within the stipulated time under the Singapore Electricity Market Rules (the "market rules").
15. On 7 November 2013, the MSCP wrote to inform EMC that it considered that EMC had prima facie breached section 9.2.1.1 of Chapter 6 of the market rules and invited EMC to make written representations.
16. EMC replied on 22 November 2013 that it would not be making written representations. However, EMC urged the MSCP to take into consideration EMC's diligence in resolving the matter expeditiously with negligible adverse impact to the market as well as EMC's commitment in ensuring the smooth and reliable operation of the NEMS system and maintaining the operational integrity of the market.

APPLICABLE MARKET RULES

17. Section 9.2 of Chapter 6 of the market rules provides that
 - 9.2.1 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* in accordance with section D.24 of Appendix 6D, including:
- a. *energy prices for each market network node*;
 - b. *the uniform Singapore electricity price*;
 - c. *reserve prices for each reserve class and for each reserve provider group*;
and
 - d. *regulation prices*.

The market operations timetable in Appendix 6A of Chapter 6 provides that the EMC shall issue real-time dispatch schedules to the PSO prior to the beginning of each dispatch period.

ENFORCEMENT

18. The MSCP determines on the basis of the facts referred to above that EMC breached section 9.2.1.1 of Chapter 6 of the market rules.
19. This incident was self-reported and had no significant impact on the wholesale electricity markets. EMC has also taken remedial actions to prevent recurrence of the problem.
20. The MSCP hereby issues a letter of non-compliance to EMC and directs EMC to pay costs, fixed at \$1,500.



Thean Lip Ping
Chair
Market Surveillance and Compliance Panel