FACTS AND CIRCUMSTANCES


2. SRCGTG1 had a scheduled maintenance on 19 August 2021 to undertake repair work to rectify its load gear compartment heat detector. A shutdown was planned for 01:00 hrs (period 3) onwards and desynchronisation from 01:30 hrs (period 4).

3. As SRC prepared to shift the cogeneration steam load to the utility boiler, one of the refinery’s steam boilers tripped at 00:45 hrs (period 2) caused by low steam drum level and was unable to be lighted up due to an instrument fault.

4. SRC explained that there would be insufficient steam production to support the refinery’s operation if both SRCGTG1 and the utility boiler were to shut down. Therefore, SRC decided to postpone SRCGTG1’s scheduled maintenance work.

5. Nonetheless, the Operations team attempted to relight the utility boiler immediately expecting that it could still be possible to shut down SRCGTG1 to undertake the maintenance work as per scheduled, if the boiler could be started back up expeditiously. Hence, SRCGTG1’s offer was initially reduced to include the ramping down of the SRCGTG1 until there was a firm schedule to shut down.

6. The refinery’s steam boiler could not be relighted due to lock out on the burner management system. After the nomination engineer was informed, at 01:15 hrs (period 3), offer variations
were submitted for periods 4 and 5 to reflect the true generation of SRCGTG1. Subsequently, at 01:26 hrs (period 3), offer variations were submitted for period 6.

7. Section 10.4.1.1b of the Singapore Electricity Market Rules (“Market Rules”) allow for offer variations to be submitted after gate closure to reflect the facility’s revised capability for the three consecutive dispatch periods immediately following a forced outage or its failure to synchronise. In this case, the steam boiler trip occurred at period 2, therefore, the offer variations after gate closure submitted for periods 4 and 5 were within this exemption however, the offer variations for such periods reflected an increase in offer quantities, which is not allowed under the Market Rules. Furthermore, the offer variation submitted for period 6 was out of the allowable three periods window.

8. On the same day, as the utility boiler was still unable to return in time, the SRCGTG1 generation was required to be set up to its design capacity to allow for more steam generation until the boiler returned to full capacity. However, due to the colder weather and rain, the unit performance exceeded its design capacity and SRCGTG1 experienced some periods of higher than setpoint power generation. Therefore, at 11:22 hrs (period 23) offer variations were submitted after gate closure for periods 24 and 25 to reflect the unit’s excessive generation.

9. The offer variations for periods 24 and 25 reflected an increase in offer quantities, which is not allowed under the Market Rules.

10. On 3 November 2021, the MSCP wrote to inform SRC that it considered it to be in prima facie breach of section 10.4.1 of Chapter 6 of the Market Rules for periods 4, 5, 6, 24, and 25 on 19 August 2021. The MSCP invited SRC to submit written representations by 17 November 2021 before the MSCP makes a determination.

11. On 17 November 2021, SRC submitted its written representations to the MSCP with further information detailing the incident. SRC submitted additional information on the submission process, and mitigating factors for the MSCP’s consideration, including that:
   a. For non-urgent shutdown of SRC generation registered facility, the outage will be planned to be carried out during normal working hours where resources for troubleshooting will be readily available leading to faster response and recovery;
   b. SRC is currently in the process of carrying out a full retube of one of its existing utility boilers to improve the long-term reliability of the refinery’s utility boilers; and
   c. SRC is exploring to nominate a higher generation offer to factor in higher-than-rated capacity power generation during rainy days.

12. SRC indicated that a hearing was not required.

APPLICABLE MARKET RULES

13. Section 10.4.1 of Chapter 6 provides that

Notwithstanding sections 5.1.5, 5.1.6 and 5.1.7, no offer variation or revised standing offer shall be submitted by or for a market participant within 65 minutes immediately prior to the dispatch period to which the offer variation or revised standing offer applies, except:

10.4.1.1 where it is intended:
a. for a generation registered facility, to reflect its expected ramp-up and ramp-down profiles during periods following synchronisation or preceding desynchronisation; or

b. for a generation registered facility, to reflect its revised capability for the three consecutive dispatch periods immediately following a forced outage or its failure to synchronise; or

c. to contribute positively to the resolution of an energy surplus situation pertaining to which the EMC has issued an advisory notice under section 9.3.1, by allowing for decreased supply of energy; or

d. to contribute positively to the resolution of energy, reserve or regulation shortfall situations pertaining to which the EMC has issued advisory notices under section 9.3.1, by allowing for increased supply of energy, reserve or regulation; or

e. to contribute positively to the resolution of energy, reserve or regulation shortfall situations in that dispatch period, where:

i. the shortfall situations were indicated in a system status advisory notice issued by the EMC in respect of a high-risk operating state or emergency operating state declared by the PSO; and

ii. at the time of submission of such offer variation or revised standing offer, the EMC has not yet withdrawn, in respect of that dispatch period, such system status advisory notice, by allowing for increased supply of energy, reserve or regulation; and

f. for a load registered facility, to reflect its revised capability during a forced outage or following a decrease in energy withdrawal under sections 9.3.3 and/or 9.3.4 of Chapter 5; and

10.4.1.2 where the price so offered, other than for additional quantities of energy, reserve or regulation, is the same as that previously offered for that dispatch period.

ENFORCEMENT

14. Based on the facts referred to above, the MSCP determined that SRC had breached section 10.4.1 of Chapter 6 of the Market Rules for periods 4, 5, 6, 24, and 25 on 19 August 2021.

15. The incident was self-reported and did not have a significant impact on the National Electricity Market of Singapore.

16. The MSCP hereby issues a letter of non-compliance to SRC and directs SRC to pay costs fixed at $2,000. The MSCP reminds SRC to observe the Market Rules and take appropriate corrective measures to prevent future recurrences.

T P B Menon
Chair, Market Surveillance and Compliance Panel