FACTS AND CIRCUMSTANCES


2. On 13 December 2020 at 01:29 hrs (period 3), there was a sudden outage of turbine generator. The advisory alert was published at the same time relating to the forced outage condition of TUAS : GENR1 facility at 13MW.

3. Section 10.4.1.1b of Chapter 6 of the Singapore Electricity Market Rules ("Market Rules") allow offer variations after gate closure to be submitted to reflect the real capability of a facility which experienced a forced outage only for the three consecutive dispatch periods immediately following the incident. Therefore, the offer variation submitted after gate closure for periods 7 (submission time at 02:07 hours), 8 and 9 (submission time at 03:20 hours) have been assessed to be not compliant with the Market Rules, given that TUAS : GENR 1 experienced the technical issue at period 3.

4. On 1 March 2021, the Market Surveillance and Compliance Panel ("MSCP") wrote to inform NEA that it considered NEA to be in prima facie breach of section 10.4.1 of Chapter 6 of the Market Rules for periods 7 to 9 on 13 December 2020. The MSCP invited NEA to submit written representations by 15 March 2021 before the MSCP makes a determination.

5. On 5 March 2021, NEA submitted its written representations to the MSCP on further supporting information and data detailing the incident:

   a. NEA explained that the trip of TUAS : GENR1 facility was due to the activation of the protection interlock by high turbine flash tank level. The cause of the unexpected surge in water level in the turbine flash tank was traced to the uncontrolled opening of the
steam bypass station as a result of an oil leak from its hydraulic line. The loss in hydraulic pressure caused the valve of the steam bypass station to open by default. This disrupted the stable operation of the turbogenerator. The shift supervisor responded by stabilising the plant and submitted the variation offers (“VOs”) to reflect the forced outage.

b. NEA provided clarification that at 2:02 hours, the shift supervisor submitted VOs of 0MW for periods 6 to 18 (batch number 732814), however overlooked selecting the checkbox for “Allow Gate Closure Violation”. Subsequently, the shift supervisor noticed that the batch status was rejected.

c. At 2:07 hours, the shift supervisor immediately resubmitted VOs of 0MW for periods 6 and 7 (batch number 732815) and selected the checkbox for “Allow Gate Closure Violation”. The shift supervisor had mistaken that the submission for periods 8 to 18 remained valid. It was later realised that the batch submission for 732814 for all the periods were rejected.

d. At 03:20 hours, after stabilizing the plant process, the shift supervisor submitted another VOs of 0MW for period 8 to 18 and selected “Allow gate closure violation” in order to reflect the actual status of the plant.

e. NEA submitted that the incident was caused by the unexpected forced outage to TUAS : GENR1 and apologised for the errors committed in the submission of VOs to reflect the forced outage. NEA had also counselled their shift supervisor on the proper procedures on the VOs submission.

f. NEA did not require a hearing.

APPLICABLE MARKET RULES

6. 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

7. Based on the facts referred to above, the MSCP determined that NEA had breached section 10.4.1 of Chapter 6 of the Market Rules for periods 7 to 9 on 13 December 2020.

8. The incident was self-reported and did not have a significant impact on the National Electricity Market of Singapore. NEA had also taken remedial actions following the incident.

9. Despite being the first rule breach of the gate closure rules by NEA, the NEA could have reduced the number of affected periods if there was a better understanding on the offer submission system. The MSCP reminds NEA to observe the Market Rules and take appropriate corrective measures to prevent future recurrences.

10. MSCP hereby imposes a financial penalty of $7,500 on NEA and directs NEA to pay costs fixed at $2,000.

T P B Menon
Chair, Market Surveillance and Compliance Panel