

**DETERMINATION OF THE MARKET SURVEILLANCE AND COMPLIANCE PANEL
MSCP/2023/D3**

Market Surveillance and Compliance Panel

Professor Walter Woon, Chairman

Mr. T P B Menon

Er. Lee Keh Sai

Mr. Philip Chua

Professor Euston Quah

Dr. Stanley Lai

Mr. Yeo Yek Seng

Date of Determination

10 March 2023

Party

YTL PowerSeraya Pte. Limited

Subject

SER G2 Failure to comply with PSO's directions on 1 August 2022

FACTS AND CIRCUMSTANCES

1. Power System Operator ("PSO") submitted a referral report on 10 August 2022 to the MSCP regarding the alleged breach of Section 3.7.1.7 of Chapter 5 of the Singapore Electricity Market Rules ("Market Rules") by YTL PowerSeraya Pte. Limited's ("YTLPS") SER G2 for its failure to comply with PSO's directions from periods 17 to 43 on 1 August 2022.
2. On 30 July 2022 at 06:34 hrs (P14), PSO issued directions in accordance with Section 3.7.1.7 of Chapter 5 of the Market Rules to YTLPS under the Directed Supply Scheme ("DSS") for 1 August 2022 from periods 17 to 43. YTLPS acknowledged the directions at 06:53 hrs (P14) on the same day.
3. SER G2 was only able to offer at its minimum stable load for 1 August 2022 from periods 17 to 24 when it failed to offer its remaining capacity to the system. SER G2 was unable to increase its loading to full capacity as it had to keep the boiler water's silica concentration below the operating threshold limit. YTLPS did not inform PSO that SER G2 was unable to offer its remaining capacity to the system.
4. At 11:40 hrs (P24), SER G2 tripped on low vacuum protection and YTLPS immediately informed PSO that SER G2 was unable to comply with PSO's directions. After investigation, YTLPS found that the loss of vacuum by the Condenser Vacuum was caused by the choking of makeup water inlet line strainer.¹ The lack of a continuous supply of seal water to the vacuum pump caused air ingress to the condenser, and the vacuum deteriorated rapidly, which caused the forced outage of SER G2.

¹ Makeup water is usually added to systems to replace the mechanical carryout of water droplets, evaporation and the blowdown required to maintain a controlled solids build up. Strainers are required to remove the waste from the cooling water before it goes into the systems.

5. On 6 October 2022, the MSCP wrote to YTLPS informing of its *prima facie* breach of sections 3.7.1.7 and 9.6.1 of Chapter 5 of the Market Rules for periods 17 to 43 on 1 August 2022 and invited YTLPS to submit written representations by 13 October 2022.
6. On 20 December 2022, the MSCP wrote to YTLPS informing of its *prima facie* breach of additional sections 3.7.1.3 and 9.6.2 of Chapter 5 of the Market Rules and section 10.2 of Chapter 10 of the System Operation Manual (“SOM”) for periods 17 to 43 on 1 August 2022 and invited YTLPS to submit written representations by 3 January 2023.
7. On 12 October 2022 and 11 January 2023, YTLPS submitted its written representations to the MSCP with further information detailing the incident, as well as mitigating circumstances for the MSCP’s consideration. YTLPS also informed that it fully acknowledged and complied with its duty of adherence to the Market Rules and that it will continue to work closely with the authorities to promptly resolve all issues.
8. YTLPS indicated that a hearing was not required.

APPLICABLE MARKET RULES

9. Section 3.7.1 of Chapter 5 provides that

3.7.1 Each *market participant* for a *generation facility* shall operate and maintain its facilities and equipment in a manner that is consistent with the *reliable* operation of the PSO *controlled system* and shall assist the PSO in the discharge of its responsibilities related to *reliability* and related *responsibilities* specified under this section 3.7.1. Such obligation shall include the following:

3.7.1.3 promptly informing the PSO of any change or anticipated change in the status of any *generation facility* in respect of which it is the *market participant* or any related equipment and that is under the *dispatch* control of the PSO as described in these *market rules*, or of any other change or anticipated change in its *generation facilities* or equipment that could have a material effect on the reliability of the *PSO controlled system*. Such change shall include any change in status that could affect the maximum output of a *generating unit*, the minimum load of a *generating unit*, the ability of a *generating unit* to operate with *automatic* voltage regulation or the availability of a *generating unit* to provide contracted *ancillary services*;

3.7.1.7 promptly complying with the *PSO*’s directions issued under Chapter 9, section 9.6.4(ii) of the *System Operation Manual*, and any further directions issued by the *PSO* relating to (a) the fuel to be used by the *generation facility*, (b) the relevant *market participant*’s contractual agreements for and in relation to the purchase and use of fuel by the *generation facility*, and (c) the associated *energy offers* deemed necessary by the *PSO* to prevent inefficient market outcomes arising from the *PSO*’s directions issued under Chapter 9, section 9.6.4(ii) of the *System Operation Manual*.

10. Section 9.6 of Chapter 5 provides that

9.6.1 Each *dispatch coordinator* shall ensure that each of its *registered facilities* complies with the *dispatch instructions* issued in respect of such *registered facility*, except as may otherwise be permitted under these *market rules*.

APPLICABLE SYSTEM OPERATION MANUAL

11. Section 10.2 of Chapter 10 provides that

10.2 Criteria for measuring compliance

This section deals with non-compliance with PSO's directions or dispatch instructions only.

Transmission Licensee, each Generation Licensee, Wholesaler (Generation) Licensee and Interruptible Load Provider shall ensure that each of its transmission facilities, generation or load registered facilities complies with the directions or dispatch instructions issued in respect of the facilities, except as may otherwise be permitted under these market rules.

Transmission Licensee, any Generation Licensee, Wholesaler (Generation) Licensee or Interruptible Load Provider that expects its facilities to operate in a manner that, for any reason, differs materially from the directions or dispatch instructions issued to it by the PSO, shall so notify the PSO as soon as possible.

Compliance with a direction or dispatch instruction for a transmission, generation or load registered facilities is not required if such compliance would endanger the safety of any person, damage equipment, or violate any applicable law. The Transmission Licensee, Generation Licensee, Wholesaler (Generation) Licensee or Interruptible Load Provider for a transmission, generation or load registered facilities that departs from directions or dispatch instructions for any reason shall so notify the PSO.

If the failure by a transmission, generation or load registered facilities to comply with a direction or dispatch instruction endangers the reliability of the power system, the PSO shall declare the facility to be non-conforming and shall take any actions allowed or any other provision of the market rules as the PSO determines appropriate.

ENFORCEMENT

12. Based on the facts referred to above, the MSCP determined that YTLPS had breached the following sections of the Market Rules and the SOM on 1 August 2022:
 - a. section 3.7.1.7 of Chapter 5 of the Market Rules and section 10.2 of Chapter 10 of the SOM for SER G2 for periods 17 to 43;
 - b. section 3.7.1.3 of Chapter 5 of the Market Rules for SER G2 for periods 17 to 24; and
 - c. section 9.6.1 of Chapter 5 of the Market Rules for SER G2 for periods 25 to 43.
13. It is noted that this was the fifth breach related to non-compliance with PSO directions by YTLPS in the last 4 months, and the second incident of this nature involving SER G2. The PSO has oversight of the state of the power system and issues directions to market participants in order to ensure the security and stability of the system. Compliance with such directions is not optional. Failure to comply may undermine system security and the fair and efficient operation of the electricity market.

14. The incident did not have a significant impact on the National Electricity Market of Singapore. Nonetheless, in view of the repeated breaches by YTLPS within a short space of time, the MSCP hereby imposes a financial penalty of \$75,000 on YTLPS and directs YTLPS to pay costs fixed at \$2,000.
15. YTLPS is sternly reminded that the MSCP takes a very serious view of repeated non-compliance with PSO directions, especially where such breaches may undermine system security or the fair and efficient operation of the wholesale electricity markets. It is critical that market participants comply with their obligations, in accordance with the Market Rules and the SOM, in order to ensure a reliable supply of electricity.



Professor Walter Woon
Chairman, Market Surveillance and Compliance Panel