

**DETERMINATION OF THE MARKET SURVEILLANCE AND COMPLIANCE PANEL  
MSCP/2016/D6**

**Market Surveillance and Compliance Panel (“MSCP”)**

Mr T P B Menon, Chair  
 Mr Lee Keh Sai  
 Mr Philip Chua  
 Professor Euston Quah  
 Professor Walter Woon

**Date of Determination**

17 October 2016

**Party**

Senoko Energy Pte Ltd (“Senoko Energy”)

**Subject**

Senoko Energy’s appeal for refund of financial penalty for non-compliance event on 20 April 2016

**FACTS AND CIRCUMSTANCES**

- Senoko Energy submitted an appeal on 27 May 2016 to the MSCP under section D.5.1 of Appendix 5D of Chapter 5 of the Singapore Electricity Market Rules (“market rules”) for a refund of the financial penalty incurred under the automatic financial penalty scheme (“AFPS”) due to a non-compliance event regarding its combined cycle generation registered facility (“GRF”) SNKCCP5 on 20 April 2016, period 30.
- Senoko Energy was unable to comply with the dispatch instruction from the Power System Operator (“PSO”) on 20 April 2016, period 30. The table below sets out the sequence of incidents as provided by Senoko Energy which led to the non-compliance event.

<b>Time (hrs)</b>	<b>Description of Incident</b>
14:41	The main steam temperature (“MST”) in SNKCCP5 rose beyond 568°C, triggering an alarm. 568°C is the first limit for MST monitoring alerts.
14:42	The high pressure spray control valve (“CV”) was adjusted to open from 80 percent to 100 percent. However, the spray flow remained low and the MST continued to increase.  <i>High pressure spray control keeps the MST in the steam turbine within safe operating limits and protects the heat recovery steam generator</i>

Time (hrs)	Description of Incident
	<i>superheater ("HRSG") tube. If the high pressure spray control fails or if there is insufficient spray water flow, the high temperature of the gas turbine exhaust heat will cause the HRSG tube to overheat and rupture. Tube rupture will further damage boiler tubes.</i>
14:45	The plant operator physically opened the CV upon noticing that the electronic adjustment did not fully open the CV.
14:50	The MST exceeded 573°C and triggered the protection load shedding ("PLS"), which caused SNKCCP5 to go off automatic generator control ("AGC") and de-load. 573°C is the second limit for MST monitoring alerts.  <i>The PLS is a critical protection feature to prevent damages to SNKCCP5.</i>
14:51	The MST fell below 568°C and the PLS was reset.
14:56	The output from SNKCCP5 increased to above its minimum stable load. SNKCCP5 returned to operating under AGC.

3. The scheduled output of SNKCCP5 was 305 MW while its actual output was 200.1 MW. The deviation of 104.9 MW was above the margin of 10 MW allowed under the AFPS.
4. A financial penalty of \$5,000 was automatically imposed on Senoko Energy for its deviation from the scheduled output.
5. On 1 August 2016, the MSCP requested further information, facts and evidence relating to Senoko Energy's appeal.
6. On 12 August 2016, Senoko Energy explained that as the high pressure desuperheater spray water relief valve ("relief valve") was passing (i.e. water was leaking out of the relief valve), the water flow through the CV was insufficient to control the MST. The MST continued to increase and triggered the PLS. The passing relief valve was replaced and tested satisfactorily on 22 April 2016.
7. The relief valve was replaced during a shutdown on 22 December 2015. The CV was serviced and calibrated on 23 December 2015. Since then, there had been no reported issue with the CV until the non-compliance event on 20 April 2016.

## APPLICABLE MARKET RULES

8. Section D.5.1 of Appendix 5D of Chapter 5 provides that

*The market participant of a deviating generation registered facility may appeal to the market surveillance and compliance panel for a refund of any financial penalties paid or required to be paid by it under the automatic financial penalty scheme detailed in this Appendix 5D if it can demonstrate to the satisfaction of the market surveillance and compliance panel that compliance with a dispatch instruction was not required pursuant to one or more of the conditions in section 9.6.3 of Chapter 5. Such appeal shall be made in writing in such form and manner as may be prescribed by the market surveillance and compliance panel and shall:*

- D5.1.1 contain the name and address of the *market participant* submitting the appeal;

- D5.1.2 contain the particulars of the appeal;
- D5.1.3 contain all information, facts and evidence supporting the appeal; and
- D5.1.4 be accompanied by a copy of the final financial penalty statement setting out the financial penalty which is the subject of the appeal.

A *market participant* shall not submit, and the *market surveillance and compliance panel* may dismiss, an appeal to the *market surveillance and compliance panel* if more than twenty *business days* have elapsed since the date of the issuance of such final financial penalty statement.

9. Section 9.6.3 of Chapter 5 provides that

Compliance with a *dispatch instruction* for a *registered facility* is not required if such compliance would endanger the safety of any person, substantially damage equipment, or violate any *applicable law*. Subject to section 9.3.5, the *dispatch coordinator* for a *registered facility* that departs from *dispatch instructions* for any such reason shall so notify the *PSO* in accordance with section 9.6.2.

10. Section D.5.4 of Appendix 5D of Chapter 5 provides that

If the *market surveillance and compliance panel* determines that the *market participant* referred to in section D.5.1 was not required to comply with a *dispatch instruction* for any given *dispatch period* on the ground that at least one of the conditions in section 9.6.3 of Chapter 5 applies, the *market surveillance and compliance panel* shall:

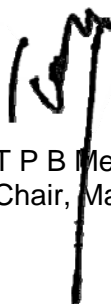
- D5.4.1 allow the *market participant's* appeal in respect of that *dispatch period* submitted under section D.5.1; and
- D5.4.2 direct the EMC to refund such market participant of the relevant financial penalty received by the EMC from such market participant for that dispatch period. Such financial penalty shall be refunded to the market participant without interest.

If the *market surveillance and compliance panel* determines that none of the conditions in section 9.6.3 of Chapter 5 applies to the non-compliance with a *dispatch instruction* by a *market participant* referred to in section D.5.1, the *market surveillance and compliance panel* shall dismiss the appeal submitted under section D.5.1. The *market surveillance and compliance panel* shall notify the *EMC* and such *market participant* of its determination under this section D.5.4 and give its reasons for such determination. The *EMC* shall *publish* such determination of the *market surveillance and compliance panel* and its reasons for such determination.

## **MSCP'S DETERMINATION**

11. Based on the information, facts and evidence provided by Senoko Energy in this appeal, the MSCP assessed that the root cause of Senoko Energy's non-compliance with the dispatch instruction from PSO was the failure of the relief valve in SNKCCP5.

12. The MSCP is of the view that a purposive approach should be adapted in interpreting section 9.6.3 of Chapter 5 of the market rules (see section 9A of the Interpretation Act and the case law on the subject). Applying the purposive approach, non-compliance with a dispatch instruction may only be excused under exceptional circumstances. The burden of proving this lies on Senoko Energy. In the MSCP's opinion, Senoko Energy failed to prove that the non-compliance in this case occurred under exceptional circumstances. Consequently, Senoko Energy should not be excused or released from its obligation to comply with the dispatch instruction.
13. Based on the above assessment, the MSCP determines that none of the conditions in section 9.6.3 of Chapter 5 of the market rules applies to Senoko Energy's non-compliance with the dispatch instruction from PSO.
14. The MSCP hereby dismisses the appeal submitted by Senoko Energy and directs Senoko Energy to pay costs fixed at \$5,225.



T P B Menon  
Chair, Market Surveillance and Compliance Panel