MINUTES OF THE RULES CHANGE PANEL
127th MEETING
HELD ON THURSDAY, 10 MARCH 2022 AT 10.00AM
VIA VIDEO-CONFERENCING

Present:  
Toh Seong Wah (Chairman)  
Soh Yap Choon  
Tony Tan  
Sean Chan  
Cheong Zhen Siong  
Fong Yeng Keong  
Henry Gan  
Teo Chin Hau  
Calvin Quek  
Song Jian En  
Ho Yin Shan  
Tan Chian Khong

Absent with Apologies:  
Carol Tan  
Dr Toh Mun Heng

In Attendance:  
Poa Tiong Siaw  
Li Zhenhui  
Vincent Wise  
Wang Jing  
Qin Weixiao  
Lim Chern Yuen

1. Notice of Meeting

The Chairman called the meeting to order at 10.00am. The Notice and Agenda of the meeting were taken as read.

1.1 Replacement of Representative of the Retail Electricity Licensee class of market participant

The RCP was informed that the EMC Board approved the appointment of Mr Song Jian En from YTL PowerSeraya Pte Ltd. to the RCP as a representative of the Retail Electricity Licensee class of market participant.

The Chairman welcomed Mr Song Jian En to the 127th RCP Meeting.

2. Confirmation of Minutes of the 126th Rules Change Panel Meeting

The Minutes of the 126th Rules Change Panel (“RCP”) meeting, held on 8 November 2021, were approved by the RCP.

3. Monitoring List

The RCP noted the content of the Monitoring List.

4. Summary of Outstanding Rule Changes

The RCP noted the summary of outstanding rule changes.

5. Rules Change Work Plan Status Update

The RCP noted the update on the Rules Change Work Plan.
(Paper No. EMC/RCP/127/2022/05)

Mr Vincent Wise updated the RCP on the progress made in the previous work plan approved in March 2021. Out of the 12 issues scheduled to commence within the 12 months, 4 issues have been completed and significant progress was made on 4 other issues. He gave an update on the status of the 4 completed and 4 ongoing issues.

6.1 Mr Vincent Wise went on to brief the Panel on the consultation process and ranking methodology adopted. He added that, in the 120th RCP meeting, the Panel had supported the approach in which an existing issue not ranked in the top half in the 3 immediately preceding exercises be automatically removed from a prioritisation exercise. The 4 issues were removed from the work plan taking into account their rankings from the exercises from 2019 to 2021:

<table>
<thead>
<tr>
<th>Issue Title</th>
<th>Issue Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review CVP associated with violation of Type 2 Artificial Lines</td>
<td>2016</td>
</tr>
<tr>
<td>Treatment of consecutive trading periods for demand response events</td>
<td>2018</td>
</tr>
<tr>
<td>Minimum Stable Load (MSL) for Load Registered Facilities</td>
<td>2019</td>
</tr>
<tr>
<td>Removal of RCP’s Review of EMC Budget</td>
<td>2019</td>
</tr>
</tbody>
</table>

6.2 Mr Vincent Wise informed the Panel that EMC recommended 10 issues (including 4 ongoing issues) to be shortlisted for commencement within the next 12 months. EMC has recommended, for the Panel’s deliberation, the removal of 2 issues since they received significant votes for removal.

(Mr Teo Chin Hau joined the meeting)

6.3 The Panel considered and discussed the highest-ranked issues on the list.

6.4 Mr Soh Yap Choon asked if implementation of the issues will be based on the prioritisation ranking. Mr Poa Tiong Siaw replied that EMC will focus on the 4 ongoing issues as a priority before progressing on the rest of the issues according to the ranking. Mr Poa commented that the ranking encompasses both the importance and urgency of the issues and requested for the flexibility to work on certain urgent issues first if the need arises.

6.5 In response to Mr Soh Yap Choon’s question about existing issues that have not been ranked in the top half in the 3 immediately preceding exercise, Mr Poa Tiong Siaw said that adopting the approach supported by the Panel in the 120th RCP meeting, such issues will be removed from the next prioritisation exercise. He added that stakeholders can submit the issue again and it will be treated as a new issue.
6.6 The RCP **unanimously** agreed on the following Rules Change Work Plan 2022 and tasked EMC to monitor its progress.

<table>
<thead>
<tr>
<th>Issue No.</th>
<th>Issue Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Imposition of Minimum Net Tangible Asset as a Condition of Participation for Retailers</td>
</tr>
<tr>
<td>2</td>
<td>Holistic review of the current prudential requirement obligations and its enforcement process under the market rules</td>
</tr>
<tr>
<td>3</td>
<td>Provision/clearing of ancillary services without active power generation</td>
</tr>
<tr>
<td>5</td>
<td>Introduction of Solar Forecast in existing EMC’s MCE</td>
</tr>
<tr>
<td>29</td>
<td>Holistic review of the Market Rules related to cessation of business, liquidation, and insolvency</td>
</tr>
<tr>
<td>34</td>
<td>Exemption from Automatic Financial Penalty Scheme (APS) during Fuel Changeover (FCO) directed by PSO</td>
</tr>
<tr>
<td>4</td>
<td>Review of Scope and Framework for compensation under Chapter 5</td>
</tr>
<tr>
<td>7</td>
<td>Price revision (re-run) to market price cap for periods with real-time load shedding and periods whereby PSO issues overriding dispatch instructions</td>
</tr>
<tr>
<td>28</td>
<td>Definition of “failure to synchronise”</td>
</tr>
<tr>
<td>32</td>
<td>Review of Regulation Effectiveness Factor or similar compensation scheme to reward greater responsiveness of facilities for Regulation</td>
</tr>
</tbody>
</table>

6.7 Noting from Mr Vincent Wise that Issue #13 can be looked into under Issue #2, the RCP **unanimously** agreed to remove the following 2 issues from the work plan.

<table>
<thead>
<tr>
<th>Issue No.</th>
<th>Issue Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Redeeming the full amount of an MP’s Banker’s Guarantees (BGs) upon default</td>
</tr>
<tr>
<td>12</td>
<td>Improvement of real-time information flow regarding unplanned outages and return to service</td>
</tr>
</tbody>
</table>

7. **Incorporation of Solar Generation Forecast in MCE**  
(Paper No. EMC/RCP/127/2022/RC371)

Mr Lim Chern Yuen presented the proposal to incorporate solar generation forecasts in the Market Clearing Engine (MCE) to produce market schedules.

7.1 Mr Lim Chern Yuen presented EMC’s analysis of the background, benefit and cost of the proposal. He went on to present the proposed modifications to the Market Rules. He informed the RCP that the proposed modifications were published on 28 December 2021 for consultation and comments received from PacificLight and Senoko Energy were responded to.

7.2 Mr Calvin Quek asked if there are any actual solar data that has been factored into the end of period solar forecast. Mr Soh Yap Choon replied that PSO is unable to factor actual solar output in recent hours into solar forecasts. He said the PSO uses data collected from the solar irradiance...
sensors installed island wide to derive solar forecasts.

7.2.1 Mr Calvin Quek noted that there is a lag in verification and questioned about the accuracy of the end of period solar forecast. Mr Soh Yap Choon replied that it was requested during consultation for a solar forecast accuracy similar to the load forecast accuracy that EMC publishes in the NEMS annual report. Mr Henry Gan suggested one method would be to use meter data for Intermittent Generation Facilities as a comparison against the solar forecast. Mr Gan added that the timeliness of publishing the data to market participants will depend on how fast SP sends the meter data to EMC.

7.3 Mr YK Fong noted that the total cost of implementation is about $690,000 and asked where the cost will be recovered from. Mr Henry Gan clarified that the total cost is made up of both EMC internal cost and external vendor cost where EMC’s internal cost is already paid for. The external cost of about $360,000 will be recovered from the market through exogenous claims approved by EMA.

7.3.1 Mr Tan Chian Khong asked if EMC is required to use a dedicated vendor or uses the three quotes system to ensure competitive quotes. Mr Henry Gan replied that EMC does not have a dedicated vendor. EMC goes through the competitive process where suitable vendors will be invited to submit proposals. EMC will do the necessary evaluation before awarding the project.

7.4 Mr Soh Yap Choon noted that solar forecasting is only one part of the entire issue of solar penetration into the Singapore grid. There will be subsequent changes required, for e.g., a need to increase system reserve and/or regulation requirements, which will require changes in the Market Clearing Engine (“MCE”). PSO will be working with EMC on the additional required changes to ride on to this proposed change. Chairman agreed that PSO and EMC should make use of this opportunity to roll out the changes together to avoid incurring additional cost to the market if changes were to be implemented separately.

7.5 Mr Calvin Quek noted that changes will be made to reserves and regulation and asked about the process for the said changes. Mr Soh Yap Choon said that these changes will still follow the current rule change process.

7.5.1 Mr Calvin Quek asked if the implementation of this proposal will be pushed back to accommodate the consultation process for the additional changes relating to reserves and regulation. Mr Soh Yap Choon replied there is no need to delay the implementation of the solar generation forecast in the MCE as they are 2 different changes to the MCE. Mr Poa Tiong Siaw agreed with Mr Soh that they are 2 independent changes.
7.6 EMC recommended that the RCP:
   a) support the proposed rule modifications;
   b) recommend that the EMC Board adopt the proposed rule modifications; and
   c) recommend that the proposed rule modifications come into force
      i. 53 weeks after the date on which the approval of the Authority is published by the EMC; or
      ii. upon completion of the Energy Management System upgrade to incorporate the solar forecasting system, whichever is later.

7.4.1 The RCP **unanimously supported** EMC’s recommendations above.

There being no other matters, the meeting ended at 11.10am.

**Toh Seong Wah**  
Chairman

Minutes taken by:  
Angeline Tan  
Executive, Legal and Corporate Secretariat