MINUTES OF THE RULES CHANGE PANEL
66th MEETING
HELD ON TUESDAY, 5 MARCH 2013 AT 9.35AM
AT ENERGY MARKET CO. PTE LTD
238A THOMSON ROAD #11-01
NOVENA SQUARE, SINGAPORE 307684

Present: Dave Carlson Toh Seong Wah
          Michael Wong Dr. Toh Mun Heng
          Luke Peacocke Sean Chan
          Dallon Kay Phillip Tan
          Kng Meng Hwee Pak-Juan Koe
          Lawrence Lee

Absent with apologies: Chan Hung Kwan Loh Chin Seng
                      Low Cheong Kee Daniel Lee

In Attendance: Paul Poh Tan Liang Ching
         (EMC) Lucia Loh Serena Ho
        Wang Jing Nerine Teo

1.0 Notice of Meeting

The Chairman called the meeting to order at 9.35am. The Notice and Agenda of the meeting were taken as read.

2.0 Confirmation of Minutes of the 65th Rules Change Panel Meeting

The Minutes of the 65th Rules Change Panel meeting held on 8 January 2013 were tabled.

As there were no amendments to the Minutes, the Rules Change Panel approved the Minutes.

2.1 Matters Arising

The Panel noted that there are no follow-up actions for any matters arising.
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3.0 Monitoring List

The Panel noted the contents of the paper.

4.0 Summary of Outstanding Rule Changes

The Panel noted the summary of outstanding rules change proposals.

5.0 Rules Change Workplan Status Update

The Panel noted the contents of the Rules Change Workplan Status Update.

6.0 Proposed Provision for Price Revision when generating units fail to revise their offers in good faith (Paper No. EMC/RCP/66/2012/CP44)

Ms. Serena Ho updated the Panel on the impact of past rerun incidents on USEP, and presented a comparison of the pros and cons of the five options (MSCP, DRC, Automatic Settlement Adjustment, Hybrid Model and price revision), followed by a proposed framework to determine the basis for compensation. She also shared the simulation result of the proposed formulas.

The Chairman asked for clarification on the “duty of care between MPs”. Mr. Paul Poh explained that the Market Rules as per the Electricity Act is a contract between MPs and EMC. There is no direct contract between MPs. In order to allow for an MP to compensate another MP due to the former’s breach of the market rules, there needs to be some form of contractual relationship between the MPs. However, this might indirectly create a duty of care between MPs, whereby MPs would then have to worry not only about breaching the market rules, but also about how other MPs would be affected by their breach of the rules and in turn, require compensation.

Mr. Dallon Kay asked if the 500MW threshold would still be in place under the price revision option, as stated in the paper. Mr. Poh said that the threshold was proposed when the paper was first published for consultation. Whether or not it should be implemented could be discussed and decided by the RCP if the price revision option is chosen.
Mr. Kng Meng Hwee asked what was meant by “would not be equitable if there is no claw back”. Ms. Ho said that having financial equity meant that all parties pay and receive what they ought to have if offers had been revised accurately and ex-ante prices were reflective of actual market conditions. In this case, if there was no claw back from consumers who had benefited, there would either be insufficient funds to compensate the affected MPs fully, or the offending MP would have to pay more than it ought to, so as to make up for the benefit to consumers that was not clawed back. This would not be entirely financially equitable.

Mr. Kay said that the assumption that 90% of the retail contracts are on fixed price is crucial, and asked if the figure was substantiated in any way. Mr. Poh replied that EMC did not have information on this. EMA assumed a retail contract level of 80% when it worked with their consultants on setting the recent vesting contracts levels for 2013/14.

Mr. Kng asked if there could be a hybrid of Option 3 and Option 4. He meant the MSCP would determine the fine as usual under Option 4 but instead of the DRC determining the compensation claims under Option 4, Option 3’s automatic settlement adjustment be used to determine the amount of compensation automatically, based on formulas for the calculation of the compensation amount.

Mr. Michael Wong said that a price revision should be done to preserve the price signal integrity and achieve consistency with the other types of price revisions currently allowed in our market. Mr. Kng asked if Mr. Wong was concerned about market price signals or about affected gencos not being compensated. He said that if the issue was about having correct price signals, there could be price revision without affecting settlement. Mr. Kng then reiterated it is not right to change the price after the good has already been delivered and consumed. He said that having Type 1 to Type 5 price reruns now did not mean that we should allow more scenarios for reruns, and stressed that we should not be consistently wrong. Mr. Wong said that in such case the Panel should revisit all types of price rerun as stated in the rules so as to establish consistent and correct practices. Mr. Kng responded that Mr. Wong could always propose a rule change on this.

Mr. Peacocke said that it is important for the market to reflect reality through the correct price signals. He highlighted that the proposal by the EMC team suggested using the Emergency Operating State (EOS) as a trigger to conduct price revision. If consumers are informed and aware beforehand that there would be a possibility of a price rerun during periods of EOS, they could accordingly prepare for it if they have any net exposure to real time prices. He added that he agreed with the proposal to include the price rerun because incentives should be set right and prices should be reflective of the actual market conditions for the product.
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The Chairman noted that only the 10-20% of consumers who have net exposure to spot prices would be affected, and added that consumers have a choice of whether or not they want to be on fixed rates or bear some risk and be exposed to the spot prices. He pointed out that those exposed to spot prices are usually the big consumers.

Mr. Kay highlighted that the simulated impact of the 13 December 2011 incident on the market focused solely on Energy, and the impact on reserve and regulation providers was not addressed.

Mr. Kay said that it should not be looking at using a compensation framework, and did not accept that the issue should be set aside now, and left to monitoring.

Mr. Wong said that since the Panel has noted of the issue which has already happened in the market and there were five proposed ways to address the issue, we should not leave it to the monitoring list without doing anything; but instead the Panel should discuss and agree on the best option.

Mr. Wong asked EMC to find out the practices of price-reruns in other ex-ante markets in other countries, including the scopes of different types of reruns allowed. The Chairman agreed to take up as a follow up action.

A. The following Panel members then Voted to supplement the implementation of Option 5:

- Luke Peacocke (Representative of Generation Licensee)
- Michael Wong (Representative of Retail Electricity Licensee)
- Dallon Kay (Representative of the Wholesale Electricity Market Trader)

The following Panel Members Voted Not to Support the implementation of Option 5

- Phillip Tan (Person experienced in Financial Matters in S'pore)
- Kng Meng Hwee (Representative of the PSO)
- Toh Seong Wah (Representative of the EMC)
- Toh Mun Heng (Representative for the interests of consumers of Electricity)
- Pak-Juan Koe (Representative of Generation Licensee)

The following Panel Members Abstained to Vote:

- Sean Chan (Representative of Retail Electricity Licensee)
- Lawrence Lee (Representative of Market Support Services Licensee)
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Mr. Chan suggested that instead of just placing the issue in the Monitoring List, the Panel should look into having a hybrid of the proposed options which could address the fair compensation to the affected generator while a price revision could be performed to reflect the correct price signal without settlement.

B. The Chairman then asked the Panel Members to vote to place the “Proposed Provision for Price Revision when generating units fail to revise their offers in good faith” in the Monitoring List under “The frequency on non-compliance of dispatch instruction”.

The following Panel members Voted to place this on the Monitoring List:

- Phillip Tan (Person experienced in Financial Matters in S’pore)
- Kng Meng Hwee (Representative of the PSO)
- Toh Mun Heng (Representative for the interests of consumers of Electricity)
- Pak-Juan Koe (Representative of Generation Licensee)
- Lawrence Lee (Representative of Market Support Services Licensee)

The following Panel members Voted Not to place this on the Monitoring List, but instead to continue evaluating a hybrid of the proposed options:

- Luke Peacocke (Representative of Generation Licensee)
- Dallon Kay (Representative of the Wholesale Electricity Market Trader)
- Michael Wong (Representative of Retail Electricity Licensee)
- Sean Chan (Representative of Retail Electricity Licensee)

The following Panel member Abstained to Vote to place this on the Monitoring List:

- Toh Seong Wah (Representative of the EMC)

Thus, the Panel by majority votes supported to place “the frequency on non-compliance of dispatch instruction” into the Monitoring List.

EMC will include “any non-compliance of dispatch instruction” referred for investigation by PSO to the MSCP in the Monitoring List.
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7.0 Publication of Total Available Offer Capacity
(Paper No. EMC/RCP/66/2013/CP45)

Ms. Nerine Teo presented the paper on a proposal to publish Total Available Energy Offer Capacity for all products and all schedules shown in the table below:

<table>
<thead>
<tr>
<th>Product/ Schedules</th>
<th>Real-Time Schedule</th>
<th>Dispatch Schedule</th>
<th>Forecasts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy</td>
<td>Currently Released under Web Services</td>
<td>Proposed to be published</td>
<td>Proposed to be published</td>
</tr>
<tr>
<td>Reserve (Primary, Secondary, Contingency)</td>
<td>Proposed to be published</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regulation</td>
<td>Proposed to be published</td>
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</tbody>
</table>

This was not part of the proposal. However, this data will be published if the RCP decides that it should be published.

Ms. Teo then presented an evaluation of the costs and benefits of releasing the above data.

Benefits may arise from:

1. Transparency where it facilitates market monitoring by other stakeholders
2. Credibility where it enables stakeholders to observe offer patterns and predict price outcomes
Costs may arise from:

1. Market Power Issues where it facilitates potential capacity withholding in the energy and regulation markets.
2. Implementation costs where system and reporting changes are estimated at $57,000

The Panel was then informed of the Pivotal Supplier Test, which is used in other jurisdictions to identify market power and in turn, potential capacity withholding opportunities. Incidentally, this test uses total supply offers, which is analogous to Total Available Offer Capacity in the SWEM. This supports argument that dominant genco may use information to determine supply tightness and in turn, potentially exercise market power. Thus it was useful to evaluate if a pivotal supplier exists in the SWEM.

Discussion on Pivotal Suppliers in the SWEM

Ms. Teo presented results from applying the Pivotal Supplier Test to energy and regulation data in the SWEM (1 June 2012 to 31 August 2012). Reserve was excluded in the simulation because there is low likelihood of capacity withholding for this product. The findings are summarized below:

For Energy:

Pivotal suppliers do exist in the SWEM for selected dispatch periods. The Publication of Total Available Offer Capacity for Energy may facilitate capacity withholding during such periods. While relatively high retail contracted levels in the SWEM may discourage capacity withholding for energy, gentailers have control over these levels. Thus, they can reduce the respective retail contract levels at their discretion.

For Regulation:

Information on Total Offer Capacity for Regulation is likely to facilitate capacity withholding during periods of tight regulation supply.

Mr. Peacocke asked if the results presented would be similar if the 2,000MW capacity coming on board is added to the simulation. Mr. Poh replied that the capacity must be offered into the market, which can only be evaluated when the new capacity enters the market.

Mr. Kay noted that Total Available Offer Capacity for energy has already been released for real time dispatch run and asked if the same can be considered for reserve and regulation.
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Mr. Peacocke said that while the SWEM is not coupled to other markets it will remain small and relatively concentrated. As a result, there will always be potential concerns about exercise of market power. With the new capacity entering the market we should decide whether this is a catalyst for change and whether the benefit of transparency overrides the potential risk of market power.

Mr. Peacocke also commented that publishing these data will enhance efficiencies in the upcoming Futures Market and Demand Response initiatives.

Mr. Koe enquired on the implementation date of the publication of Total Available Offer Capacity. Ms. Teo replied that this will take place after the EMA’s approval of the rule change proposal. Implementation is expected only at the end of 2013. Noting that implementation would take place only after the entry of significant new capacity the Panel voted on the proposal.

The following Panel members then voted to support the release of the publication of the Total Available Offer Capacity:

- Phillip Tan (Person experienced in Financial Matters in Singapore)
- Kng Meng Hwee (Representative of the PSO)
- Toh Mun Heng (Representative for the interests of consumers of Electricity)
- Pak-Juan Koe (Representative of Generation Licensee)
- Luke Peacocke (Representative of Generation Licensee)
- Dallon Kay (Representative of the Wholesale Electricity Market Trader)
- Toh Seong Wah (Representative of the EMC)
- Lawrence Lee (Representative of Market Support Services Licensee)

The following Panel members abstained:

- Michael Wong (Representative of Retail Electricity Licensee)
- Sean Chan (Representative of Retail Electricity Licensee)

By majority vote, the Panel supported the proposal to publish Total Available Offer Capacity for energy, reserve (primary, second and contingency) and regulation in the real-time dispatch schedule,
9.0 Rules Change Panel Work Plan 2013/14
(Paper No. EMC/RCP/60/2012/09)

Ms. Serena Ho presented the progress made in the previous work plan approved in March 2012. She then presented a list of the existing issues as well as the new issues that were raised during the work plan consultation exercise, together with their corresponding rankings and comments made by various stakeholders.

The Panel discussed the 22 issues on the proposed work plan and made the following decisions:

<table>
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<tr>
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<td>Publication of total offer capacity for Reserve and Regulation in the Dispatch Run (DPR)</td>
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<td>Publication of total offer capacity for Energy, Reserve and Regulation in the Look Ahead Run (LAR)</td>
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<td>Differentiation in probability of failure computation for multi-shaft plants and single-shaft plants</td>
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<td>Removal of the first-approach of CVP rerun</td>
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<td>Composition of Rules Change Panel to represent diversity of the Wholesale Trader Class of market participants</td>
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<td>Renaming of USEP from Uniform Singapore Energy Price to Uniform Singapore Electricity Price</td>
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<td>Enhancement to minimum non-zero reserve offer capacity offer process</td>
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<td>Removal of Singapore Government Treasury bills as acceptable credit support</td>
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<td>Modeling of on-site ambient temperature into the MCE such that GTs/CCPs' maximum capacity are adjusted dynamically</td>
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1. Combine issues 5 and 6 as one issue:
   - Publication of total offer capacity for Reserve and Regulation in the Dispatch Run (DPR)
   - Publication of total offer capacity for Energy, Reserve and Regulation in the Look Ahead Run (LAR)

2. The Panel agreed to remove Issue 3 – Provision for price revision when generating units fail to revise their offers in good faith, which had been completed at the 66th RCP Meeting, prior to the Workplan prioritisation discussion.

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4. Mr. Peacocke requested EMC to change Issue 7 – Block bidding for generation facilities to read as “Block Dispatch for generation facilities”. Mr Kng commented that Issue 17 was discussed in past RCP and PSO had stated previously it was not feasible to accurately quantify effectiveness of Regulation provision; in addition Issues 14 and 15 should be removed.

Thus, the RCP, having considered the issues and EMC’s recommendations, agreed upon the 12 Rules Change Work Plan issues for 2013/14, as follows, and tasked EMC to monitor its progress.

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There being no other matters, the meeting ended at 12.30pm.

Dave E Carlson  
Chairman

Minutes taken by:  
Eunice Koh  
Senior Executive – Corp. Secretariat