1. Notice of Meeting

The Chairman called the meeting to order at 9.40am. The Notice and Agenda of the meeting were taken as read.

1.1 Replacement of the Retail Electricity Licensee class of market participant

The RCP was informed that the EMC Board approved the appointment of Mr. Daniel Au from YTL PowerSeraya Pte Ltd to the RCP with effect from 1 December 2018 to 31 December 2020.

The Chairman welcomed Mr. Daniel Au to the 106th RCP Meeting.

2. Confirmation of Minutes of the 105th RCP Meeting

The Minutes of the 105th RCP meeting held on 13 November 2018 were noted and the RCP approved the Minutes.

3. Matters Arising from the 105th RCP Meeting

- Restoration of Load Registered Facilities Activated to Provide Reserve

At the 105th RCP meeting, Mr. Soh Yap Choon suggested that the current Constraint Violation Penalty parameters should be reviewed to examine why there is a frequent contingency reserve shortfall.

3.1 Ms. Veronica Rodriguez updated that EMC has included the issue into the upcoming Rules Change Panel workplan prioritisation exercise.
4. **Monitoring List**
   The RCP noted the contents of the Monitoring List.

5. **Summary of Outstanding Rule Changes**
   The RCP noted the summary of outstanding rule changes.

6. **Rules Change Work Plan Status Update**
   The RCP noted the update on the Rules Change Work Plan.

7. **Review of Gate Closure Rules**
   (Paper No. EMC/RCP/106/2019/CP75)

   Ms. Jo Ong presented the paper which reviews the current gate closure rules in Chapter 6 Section 10.4 of the Singapore Electricity Market Rules and addresses the following two proposals:

   a. To reduce the current 65-minute gate closure
   b. To expand the current gate closure exemptions, (“expansion of the gate closure exemptions”), specifically to allow a specific generation registered facility (GRF) to re-offer into the market after gate closure when that given GRF recovers from a forced outage, as well as to include other exemptions proposed by the industry.

   EMC’s assessments are summarised as follows:

<table>
<thead>
<tr>
<th>Proposal</th>
<th>EMC’s Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shortening Gate Closure Period</td>
<td>Do not support</td>
</tr>
<tr>
<td>Allowing a GRF to reoffer within gate closure upon recovery from a forced outage</td>
<td>Do not support. Instead, support allowing GRF to reflect its reduced capability within gate closure for only the first 3 periods following forced outage.</td>
</tr>
<tr>
<td>Expanding gate closure exemptions</td>
<td>Support gate closure exemptions to:</td>
</tr>
<tr>
<td></td>
<td>▪ Reflect GRF’s revised capability when it fails to synchronise</td>
</tr>
<tr>
<td></td>
<td>▪ Increase energy, reserve or regulation supply if it improves a shortfall situation for which a HOS system status advisory notice is in effect</td>
</tr>
<tr>
<td></td>
<td>Action</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>7.1</td>
<td>Ms. Ong informed the RCP that the concept paper was published on 16 October 2018 for consultation. EMC has responded to comments received from PSO, PacificLight Power, Senoko Energy, Tuas Power, and Keppel.</td>
</tr>
</tbody>
</table>
| 7.1.1 | **Reduction of Gate Closure Period – Senoko Energy’s Comments**  
Mr. Tan Jun Jie agreed that the start-up profile of a unit needs to adhere to the Original Equipment Manufacturer’s recommended profile but added that it is not so straightforward. He elaborated that gencos often encounter scenarios where they have to wait out the gate closure period to change a unit’s offers when the plant operator informs that the unit can step up to the next load level in the profile. This limitation faced by gencos creates inefficiency for both the market and the plant.  
Mr. Tan Jun Jie asked why PSO is concerned with market volatility. Mr. Soh Yap Choon explained that in situations of tight supply or high price, PSO would assess if it is due to transmission network constraint resulted from tripping of transmission equipment and assess if it can reconfigure the network to enhance system security and to relieve such situations and in turn, reduce market volatility. |
| 7.1.2 | **Reduction of Gate Closure Period – Senoko Energy’s Comments**  
Mr. Tan Jun Jie highlighted that in Annex 4 of the paper, it was stated that the Herfindahl-Hirschman Index (“HHI”) should be interpreted with other metrics such as the number of pivotal suppliers and the price-cost mark-up, which essentially is the Lerner Index, in order to provide a fuller picture of the state of the market.  
He pointed out that it is counterintuitive that the paper stated that the Lerner Index is not useful for dynamic markets, citing the 1984 academic paper because the HHI used in the paper uses capacity which is certainly not dynamic. In his opinion, the Lerner Index is a more dynamic way than the HHI of measuring the competitiveness of a product or the market of a product as it measures how much the price of a certain product is above the marginal cost of producing the product. A market is competitive if the price is as near to its marginal cost as possible. If a firm in a certain market can charge a price much higher than the cost, it shows that there is market power or concentration in that market.  
He added that while a disadvantage of the Lerner Index is the difficulty of determining the marginal costs in the market, EMA has facilitated so by publishing the long run marginal costs quarterly. He suggested adding the Lerner Index to the RCP’s Monitoring List. |
7.1.3 Reduction of Gate Closure Period – Senoko Energy’s Comments

Mr. Tan Jun Jie sought clarification on why EMC thinks that hedging via term contracts or futures does not diminish the detriment of strategic reoffering. Ms. Ong explained that futures contracts could be pricier due to the market volatility resulting from strategic reoffering in the physical market. Hedging costs should not be unnecessarily raised due to any strategic offering arising from a shorter gate closure.

Mr. Teo Chin Hau agreed with Mr. Tan Jun Jie that it is not clear how a shorter gate closure would be detrimental to the market. He shared that regardless of the index used to measure market power, the prices for the past few years as compared to the long run marginal cost clearly indicates that there is no market power. He agreed with Senoko Energy’s comments that the risk of strategic offering is very limited and that the objective of the proposal is to improve market efficiency.

Mr. Tony Tan highlighted that one feature of the electricity market is scarcity pricing and that from the Lerner Index, gencos cannot recover their long-run marginal costs from scarcity pricing contributed by strategic reoffering. Ms. Ong clarified that strategic reoffering in the paper refers to changes in offers close to the real-time dispatch schedule without a legitimate reason. Mr. Teo Chin Hau and Mr. Tony Tan expressed that there are other mechanisms to address this, such as the market rules governing offering and vesting contracts.

7.1.4 Mr. Tan Jun Jie opined that it is a level playing field where the reaction time for the whole market is the same whether the gate closure period is 65 minutes or shorter. Ms. Wang Jing agreed but explained that the 65 minutes gate closure could still limit strategic reoffering insofar as there is still uncertainty about the final schedule such as generators tripping or demand varying. Mr. Tan Jun Jie disagreed and shared that the gate closure period may worsen the situation instead as gencos are unable to change their offers. Ms. Veronica Rodriguez clarified that that may not be the case as gencos have the opportunity to use gate closure exemptions to stabilise the system in some instances.

7.1.5 The Chairman indicated that EMC certainly recognised that there are benefits that come with a shorter gate closure period but the crux of the problem has not been addressed – that is the PSO requires the 65-minute gate closure for system security. By shortening the gate closure period to less than 65 minutes, the ability of PSO to respond is compromised.

7.1.6 Mr. Tan Jun Jie said that the only thing that is stopping the market from achieving the benefits is the PSO claiming that it cannot handle system security in a faster manner. He quoted the example where PSO handled the recent situation where 2 units tripped well within a shorter reaction time than the gate closure period. Mr. Soh Yap Choon explained that it was because the market reacted by itself without PSO interfering. Mr. Soh Yap Choon asked if there is a need at all to shorten the gate closure, because when the gate closure period was last shortened from 2 hours to 65 mins in the past (at the 23rd RCP meeting held on 21 Nov
2005, effective from 19 Jan 2006), the two main considerations were (i) to give certainty on the dispatch from a security point of view and (ii) to give certainty on the market volatility and for traders to have response time for the market participants to react with the system, which have not changed since.

7.1.7 Mr. Vijay Sirse highlighted that from the system security perspective, shortening of the gate closure presents opportunities for strategic reoffering and poses problems to the PSO in maintaining the system security and integrity. He opined that the current 65 minutes suffices as a check and balance to maintain system integrity and price predictability.

7.1.8 Mr. Y K Fong queried if other jurisdictions have considered shortening their gate closure periods. Ms. Jo Ong shared that it is natural for markets to consider reducing their gate closure periods when they have progressed to a more competitive state and would like to achieve greater efficiency.

7.1.9 Mr. Y K Fong agreed with the Chairman that the security issues should be resolved before discussions about improving market efficiency.

7.1.10 Mr. Tan Jun Jie shared that while system security is always the most important, it should not stop the RCP from supporting the shortening of the gate closure period before exploring how the system security issues can be resolved with the evolution of technology. Mr. Soh Yap Choon explained that the time required for a field officer to physically go down to the substation to do proper isolation and operation, in the worst case scenario, cannot be reduced.

7.1.11 Mr. Teo Chin Hau asked about how reducing the gate closure period from 65 minutes to 35 minutes can increase the system security risks. Mr. Henry Gan replied that if a genco were to withdraw its offers just before gate closure, there is still 65 minutes for PSO to respond by taking action. If the gate closure period is reduced to 35 minutes, the response time is shortened by 50%. Mr. Teo Chin Hau requested for statistics of gencos withdrawing their offers at the last minute for commercial reasons since the PSO is building this system security concern on the assumption that it is a common phenomenon. Mr. Tan Jun Jie and Mr. Teo Chin Hau concurred that a genco would not shut down or withdraw its unit at the last minute as it will be detrimental to the genco. Mr. Henry Gan responded that whether it is detrimental or not, there is such a possibility.

7.1.12 Mr. Teo Chin Hau summarised that from PacificLight’s perspective, he cannot understand how the shortening of the gate closure period by 30 minutes can lead to security concerns.

7.1.13 Mr. Tan Jun Jie concluded that given that technology has changed significantly over the past 13 years since the RCP last reviewed and shortened the gate closure period, he’d have expected that the gate closure period be further shortened as there are benefits to be reaped despite the costs which are magnified.
7.2 EMC recommended that the RCP
   a) support maintaining the status quo for the gate closure period;
   b) support that the existing gate closure exemption - for a GRF that has experienced a forced outage to reflect its revised capability after gate closure - allow the GRF to reflect its reduced capability after gate closure for only the first 3 periods following the forced outage;
   c) support including two other proposed gate closure exemptions – (1) to reflect a GRF’s revised capability when it fails to synchronise, and (2) to increase energy, reserve or regulation supply if it improves a shortfall situation, for which a HOS system status advisory notice is in effect; and
   d) task EMC to draft the relevant rule modifications

7.2.1 The RCP by majority vote supported EMC’s recommendation of maintaining the status quo for the gate closure period.

The following RCP members supported EMC’s recommendation:
- Mr. Henry Gan (Representative of EMC)
- Mr. Soh Yap Choon (Representative of the PSO)
- Ms. Carol Tan (Representative of Transmission Licensee)
- Mr. Sean Chan (Representative of Retail Electricity Licensee)
- Mr. Vijay Sirse (Representative of Retail Electricity Licensee)
- Mr. Matthew Yeo (Representative of Wholesale Electricity Trader)
- Ms. Ho Yin Shan (Representative of the market support services licensee)
- Mr. YK Fong (Representative of Consumers of Electricity in Singapore)

The following RCP members did not support EMC’s recommendation:
- Mr. Teo Chin Hau (Representative of Generation Licensee)
- Mr. Tan Jun Jie (Representative of Generation Licensee)
- Mr. Tony Tan (Representative of Generation Licensee)
- Mr. Daniel Au (Representative of Retail Electricity Licensee)

The following RCP member abstained from voting:
- Mr. Tan Chian Khong (Person experienced in Financial Matters in Singapore)

7.2.2 The RCP by majority vote supported EMC’s recommendation that the existing gate closure exemption - for a GRF that has experienced a forced outage to reflect its revised capability after gate closure - allow the GRF to reflect its reduced capability after gate closure for only the first 3 periods following the forced outage.

The following RCP members supported EMC’s recommendation:
- Mr. Henry Gan (Representative of EMC)
- Mr. Soh Yap Choon (Representative of the PSO)
- Mr. Tan Jun Jie (Representative of Generation Licensee)
- Ms. Carol Tan (Representative of Transmission Licensee)
Minutes of 106th RCP Meeting – 17 January 2019

- Mr. Sean Chan (Representative of Retail Electricity Licensee)
- Mr. Vijay Sirse (Representative of Retail Electricity Licensee)
- Mr. Matthew Yeo (Representative of Wholesale Electricity Trader)
- Ms. Ho Yin Shan (Representative of the market support services licensee)

The following RCP members did not support EMC’s recommendation:
- Mr. Teo Chin Hau (Representative of Generation Licensee)
- Mr. Tony Tan (Representative of Generation Licensee)
- Mr. Daniel Au (Representative of Retail Electricity Licensee)

The following RCP member abstained from voting:
- Mr. YK Fong (Representative of Consumers of Electricity in Singapore)
- Mr. Tan Chian Khong (Person experienced in Financial Matters in Singapore)

7.2.3 The RCP unanimously supported EMC’s recommendation to include two other proposed gate closure exemptions – (1) to reflect a GRF’s revised capability when it fails to synchronise, and (2) to increase energy, reserve or regulation supply if it improves a shortfall situation, for which a HOS system status advisory notice is in effect;

8. Review of Credit Support Requirements in Alignment with the Lead Time for Transfers During a Retailer of Last Resort Event
   (Paper No. EMC/RCP/106/2019/CP76)

Ms. Aiko Lee presented the paper which reviews the adequacy of the current credit support requirements in view of the lead time for customer transfers during a Retailer of Last Resort (“RoLR”) event. The following two issues surfaced during the review:

Issue 1: Whether to procure credit support based on the average number of days of exposure (“average coverage”) or the maximum number of days of exposure (“maximum coverage”); and

Issue 2: Insufficient credit support coverage arising from the transfer lead time associated with a RoLR event.

8.1 Ms. Aiko Lee informed the RCP that the concept paper was published on 11 December 2018 for consultation. Comments received from Hyflux Energy, PacificLight Power, GreenCity Energy, Shell, Keppel, SP Services and EMC Market Operations were responded to.
8.2 Mr. Tan Chian Khong sought clarification on what a RoLR event is. Ms. Aiko Lee explained that one of the ways that a RoLR event can be triggered is when an event of default, leading to a suspension of a market participant retailer, happens in the market. Ms. Wang Jing added that when a retailer is no longer able to serve its customers, the customers will be transferred back to the RoLR, which is SP Services.

8.3 For Issue 1, Ms. Aiko Lee explained that after industry consultation, EMC explored a third option of setting the requirement based on the number of days required to cover exposure for at least 95% of the time ("95% coverage"). She highlighted that increases in credit support requirements to address Issue 1 would apply equally to both MPs and MSSL. EMC recommended that the RCP discuss and decide whether to adopt Maximum Coverage or 95% Coverage.

8.3.1 With regards to Issue 1, the Chairman explained that status quo is inadequate to cover the actual number of days of exposure for about 34% of the trading days and noted that the costs of any shortfall resulting from the risk of insufficient credit support are recovered from the market.

8.3.2 Mr. Vijay Sirse said that it will be good if a balance can be strike between impacting the market and imposing a significant cost to retailers. He questioned if it makes sense to increase the coverage to 100% while imposing significant costs to the market participants. Ms. Wang Jing explained that the difference between 95% coverage and 100% coverage is the costs associated with providing 1 additional day of credit support.

8.3.3 Mr. Henry Gan said that following the recent few payment default cases, EMC has received quite a lot of queries from non-defaulting market participants who are very concerned about their need to pay for market participants who have defaulted. To preserve the financial integrity of the market, EMC, as a market operator would prefer to have maximum coverage. Mr. Teo Chin Hau said that PacificLight also supports maximum coverage.

8.3.4 To Mr. Tan Jun Jie’s query about the number of days of credit support requirements under maximum coverage indicated in Table 2 of the paper, Ms. Lucia Loh explained that the number of days indicated in Table 2 reflects the exposure assuming that there was no transfer lead time under the status quo, i.e. the number of days from Trading Day T to Trading Day T +20CD +6BD. She explained that, depending on the option supported to address Issue 2, the eventual credit support requirement may differ from that stated in Table 2.

8.3.5 Referring to the frequency column for year 2016 in Table 1 of the paper, Mr. Tan Jun Jie pointed out that it was a leap year and asked whether there was a possibility for 34 days of exposure. Ms. Lucia Loh noted the error but clarified that the maximum exposure remains at 33 days given the worst-case scenario of two public holidays falling on weekdays.
The RCP by majority vote supported for credit support requirements to be set based on maximum coverage.

The following RCP members supported maximum coverage:
- Mr. Henry Gan (Representative of EMC)
- Mr. Teo Chin Hau (Representative of Generation Licensee)
- Mr. Tan Jun Jie (Representative of Generation Licensee)
- Mr. Tony Tan (Representative of Generation Licensee)
- Ms. Carol Tan (Representative of Transmission Licensee)
- Mr. Daniel Au (Representative of Retail Electricity Licensee)
- Mr. Sean Chan (Representative of Retail Electricity Licensee)
- Mr. Vijay Sirse (Representative of Retail Electricity Licensee)
- Ms. Ho Yin Shan (Representative of the market support services licensee)
- Mr. YK Fong (Representative of Consumers of Electricity in Singapore)

The following RCP members supported 95% coverage:
- Mr. Soh Yap Choon (Representative of the PSO)
- Mr. Matthew Yeo (Representative of Wholesale Electricity Trader)
- Mr. Tan Chian Khong (Person experienced in Financial Matters in Singapore)

For Issue 2, Ms. Aiko Lee explained that EMC does not recommend maintaining the status quo (i.e. Option 1). EMC recommends that Option 4, if feasible, be implemented as the eventual, long term solution since it will remove the need for additional credit support requirements needed to account for the transfer lead time.

Ms. Lee also highlighted that since SPS is the RoLR, the incremental credit support requirements to address the transfer lead time in Issue 2 is proposed to not be applied to SPS.

Given the complexity involved and expected long lead time associated with implementing Option 4, EMC recommended that the RCP:
- **support** the implementation of **Option 2** as an interim measure to address Issue 2;
- **task** EMC to draft the proposed rule modifications to implement **Option 2**; and
- **task** EMC to work with SPS to **further explore Option 4** and to report back to the RCP with further details on the feasibility of, and the implementation cost/time estimates for Option 4.

Ms. Ho Yin Shan said that SP does not recommend adopting Option 3 because SP will need to cater for retailers of all sizes and will really require the 4 business days’ lead time to effect the RoLR process.

As for Option 4 (Backdate the default supply effective date), Ms. Ho Yin Shan said that there are implications to backdating because the customers have not been transferred yet. Ms. Aiko Lee clarified that Option 4 gives SPS time to carry out its processes but will require that...
the default supply effective date indicated in the customer transfer request be dated at 1CD after the RoLR event is triggered, instead of 3BDs after. Ms. Lucia Loh explained that this option is to achieve the original intent assumed under the market rules, which is that SP can effect the transfer by the next day following a suspension order.

Ms. Ho Yin Shan added that it is factually incorrect as customers are only transferred back to MSSL on the 4th BD and not on the first day following the suspension order. Procedurally, she opined that it is not right to backdate because the system should always reflect the actual events that took place. Moreover, SP’s system is designed to provide U-Save rebates, disbursements, etc.

Ms. Lucia Loh said that for every trading day, EMC only receives the metering data for wholesale settlement on the 5th BD after that trading day. She sought clarification in relation to the issues relating to U-save Rebates since settlement for those affected days would not have taken place yet. Ms. Ho Yin Shan said that the backdating option may have major implications on all the other disbursement processes within the system.

8.4.2 The Chairman noted it is a complicated process and the complexity of the process is not presented in enough detail for the RCP to form a view on the feasibility of Option 4. Hence, EMC had proposed to study the feasibility of Option 4 with SP Services and update the RCP on the feasibility and the associated cost for Option 4. He said that it will help if SPS could have more details to give it due consideration before ruling that option out entirely from the proposal as it is ultimately a balance between coverage and increasing cost for consumers.

8.4.3 Mr. Teo Chin Hau said that Banker’s Guarantees issued by the banks are usually for 1 year and the cost for the Banker’s Guarantees would have been already incurred. If EMC is exploring Option 4, he asked if there is a need to implement Option 2 now. The Chairman replied that even if Option 4 is feasible, it is expected to take quite a long while to implement as SP Services will have to make massive changes to their system. Hence, there is a need for an interim measure to ensure sufficiency of credit support before Option 4 takes effect.

8.4.4 Mr. Vijay Sirse asked about the implementation timeline for Option 4. The Chairman replied that if Option 4 is feasible and the RCP is agreeable to the cost to implement Option 4, SP will need to change their system and that is expected to take quite long.

8.4.5 Mr. Teo Chin Hau asked about the implementation timeline for Option 2. Ms. Lucia Loh replied that it will take about 36 calendar weeks for EMC to make the changes. Mr. Teo Chin Hau said that he is supportive of Option 2 if the lead time is short but if it will take 36 weeks, he expressed his preference to wait until the feasibility of Option 4 is assessed before making a decision. Mr. Vijay Sirse agreed with Mr. Teo Chin Hau.
### Minutes of 106th RCP Meeting – 17 January 2019

<table>
<thead>
<tr>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>8.4.6</strong> Ms. Carol Tan queried if there is any way to shorten the implementation timeline for Option 2. Mr. Henry Gan gave a breakdown of the implementation timeline for Option 2. He said that the timeline could potentially be shortened but this may increase the costs. He asked the RCP to allow EMC time to re-work the implementation timeline and cost.</td>
</tr>
<tr>
<td><strong>8.4.7</strong> Mr. Tan Jun Jie noted that it will take 26 weeks to implement Option 1 and asked if RCP were to support Option 2, is it an incremental of 10 weeks. Ms. Lucia Loh replied yes.</td>
</tr>
<tr>
<td><strong>8.4.8</strong> Ms. Carol Tan shared that as a transmission licensee, SPPG is required to give non-discriminatory access to all and inevitably, there will be defaults and bad debts that need to be socialised. She noted that defaults and bad debts had not been an issue for SPPG in the past until the recent 6 months, where there are already 4 cases of retailers withdrawing from the market and at least 1 case where there are bad debts which will need to be socialised. Such cases are causing some reputational impact and are also not in line with the causer-pays principle since bad debts caused by 1 party is being socialised to the whole market. She said that there are a couple of ways to address this and one of them is to minimise this risk of bad debts by aligning the credit support to the prescribed RoLR event. Another way is to improve the gating process when qualifying retailers to the market. She added that if it is going to take 36 weeks to implement Option 2, the market will continue to be exposed to shortfall risks for another 9 months. Mr. Henry Gan noted the urgency of this issue and said that EMC will re-work the implementation timeline.</td>
</tr>
<tr>
<td><strong>8.4.9</strong> The Chairman gave a summary of the above discussion and noted that the RCP is not ready to vote now. He summarised the follow-ups, which is (i) revised shorter implementation timeline, and (ii) feasibility of Option 4. He asked if the RCP would like to defer its decision to the next RCP meeting in two months or to decide by circulation. The RCP replied that they would prefer to do so by circulation.</td>
</tr>
<tr>
<td><strong>EMC</strong> (Mr. Y K Fong left the meeting.)</td>
</tr>
</tbody>
</table>
| **9.** **Review of Default Levy Arrangements**  
(Paper No. EMC/RCP/106/2019/CP76) |
| Ms. Qin Wei Xiao presented the paper which reviews the current arrangement on the imposition of default levy in the Singapore Wholesale Electricity Market (“SWEM”). |
| **9.1** Ms. Qin informed the RCP that the concept paper was published on 11 December 2018 for consultation. Comments received from Keppel, Shell, GreenCity Energy, PacificLight Power, Tuaspring and Tuas Power were responded to. |
9.2 Mr. Teo Chin Hau noted that the key assumption in the paper is that gencos have the ability to manage the default risk by adjusting their offer prices to reflect the default risk. He opined that commercial entities like gencos are not able to quantify the probability of default in practice as there is no visibility on the cash flow statements of other independent retailers. He did not agree with EMC's analysis which assumed that everyone is able to quantify credit risk. He said that if the objective is to level the playing field, the best way is to increase the prudential requirement or heighten the entry requirements to attract only players with good financial standing and thereby, reducing default risks.

9.2.1 The Chairman noted Mr. Teo Chin Hau's comments and said that in this case, a credit bureau service that measures the credit worthiness of all the participants in the market will be useful.

9.2.2 Mr. Tan Jun Jie concurred with Mr. Teo's views that gencos do not have enough information to be able to price in credit risks.

9.2.3 Ms. Veronica Rodriguez explained that a genco can quantify the amount when a default levy has been allocated to them and thereafter factor in that cost which will be transparent once the process has been triggered. Mr. Teo said that by doing so, the business risk is just being reallocated across different parties. Further, from gencos' perspective, default levies constitute a fixed or sunk cost which does not affect their decisions to generate.

9.2.4 Mr. Teo added that if EMC’s assumption is that gencos can always recover all its costs, then there will not be a need for prudential requirements. The Chairman clarified that EMC was referring to residual risk. Mr. Teo added that electricity prices have been much lower than the long run marginal costs for the past few years and gencos are unable to recover their full costs, what more to be able to price in the residual risk. Hence, he reiterated that PacificLight does not agree that gencos are the best party to manage such risk and proposed that if there is a need to change the current allocation mechanism, it should be passed through to the consumers who are the ultimate beneficiary from the enhanced competition of the retailers.

9.2.5 The Chairman said that the influx of independent retailers is one of the factors for this review but not the defining factor. The reason for this review of the default levy arrangements is to address obvious gaps and rectify errors so as to be better prepared when a payment default occurs.

9.3 Mr. Tony Tan pointed out that vesting contract settlement could lead to a genco being a net debtor in some cases.

9.4 Mr. Sean Chan said that the best approach to manage default risk is to take preventive actions, and the regulator is the best party to manage such risk.
9.5 With reference to the implementation costs, Mr. Sean Chan asked if EMC intends to automate the currently manual process. Mr. Tan Jun Jie said that it is worrying if there is a need to automate a system to handle the calculation. Mr. Henry Gan said that currently, EMC is unable to handle the calculations.

Mr. Gan further clarified that EMC is not automating and explained that EMC’s settlement reports and invoicing systems are all inter-linked. However, when a default levy is imposed, EMC will have to re-process the pro-rated settlement values, re-invoice the market participants, re-instruct the banks and reconcile. He said that the system changes are necessary as EMC need to ensure that the systems can produce consistent, accurate and complete reporting to the market such as the monthly confirmation notice report and prudential monitoring reports.

9.5.1 To Mr. Daniel Au’s question on how the default levy, if needed to be imposed, is currently calculated, Mr. Henry Gan replied that EMC has not had the need to impose a positive value default levy yet.

9.6 With reference to credit insurance, Mr. Tan Chian Khong said that credit insurance is good in his view, as it provides an insight as to what is the actual cost of default and gencos can quantify the credit risk to a certain extent and therefore give them some visibility on how they can price their electricity. He acknowledged, however, that credit insurance will not be able to cover 100% of the shortfall.

9.7 Mr. Tan Jun Jie said that unlike exchanges where clearinghouses also bear some of the costs when a member defaults, in the electricity market, EMC which is the clearing party does not bear such costs. The Chairman explained that it is because, unlike financial exchanges, EMC’s fees and profits are regulated by the EMA and that fee does not price in the additional risks if EMC is to bear the costs of an MP’s default. Mr. Sean Chan asked if it is an option where EMC prices it into its fees, which would be the least cost option without the need to change the system. The Chairman replied that he does not rule out this option, but EMC will have to renew the revenue regime negotiation with the EMA which will take time to reach a resolution to it.

9.8 For the example which illustrated that smaller retailers bear more risk than bigger retailers, Mr. Tan Jun Jie said that it did not consider the part where each retailer will have to satisfy prudential requirements that are proportionate to their size. This means after taking into account the probability of default, the exposure amount is also proportionately lesser.

9.9 Mr. Tan Jun Jie commented that he is supportive of making the processes more efficient, but it should not be prioritised above allocation fairness. The same issue in terms of allocation of default levy to net creditors had been examined by the RCP in 2007 and rejected by EMA in 2009. He did not see any changes from then till now and hence did not see the need to support the change in allocation. He agreed with the RCP that the entry requirement should be raised to minimise the default risk.
EMC recommended that the RCP support:

a) allocating the default levy to net creditors only, including MEUC and the EMC/PSO fees owed by the defaulting MP (Option A in section 3.1.1 of the paper),

b) allowing MEUC and the EMC/PSO fees to be recovered in full upfront in the event of a settlement shortfall,

c) correcting the erroneous default levy calculations, and

d) elucidating definitions and timelines in the Market Rules, and task the EMC to draft the relevant rule modifications to give effect to the above decisions.

The RCP by majority vote did not support EMC’s recommendation to allocate the default levy to net creditors only, including MEUC and the EMC/PSO fees owed by the defaulting MP.

The following RCP members supported EMC’s recommendation:

- Mr. Henry Gan (Representative of EMC)
- Mr. Vijay Sirse (Representative of Retail Electricity Licensee)

The following RCP members did not support EMC’s recommendation:

- Mr. Teo Chin Hau (Representative of Generation Licensee)
- Mr. Tan Jun Jie (Representative of Generation Licensee)
- Mr. Tony Tan (Representative of Generation Licensee)
- Mr. Daniel Au (Representative of Retail Electricity Licensee)
- Mr. Sean Chan (Representative of Retail Electricity Licensee)
- Mr. Matthew Yeo (Representative of Wholesale Electricity Trader)

The following RCP member abstained from voting:

- Mr. Soh Yap Choon (Representative of the PSO)
- Ms. Carol Tan (Representative of Transmission Licensee)
- Ms. Ho Yin Shan (Representative of the market support services licensee)
- Mr. Tan Chian Khong (Person experienced in Financial Matters in Singapore)

The RCP by majority vote did not support EMC’s recommendation to allow MEUC and the EMC/PSO fees to be recovered in full upfront in the event of a settlement shortfall.

The following RCP members supported EMC’s recommendation:

- Mr. Henry Gan (Representative of EMC)
- Mr. Soh Yap Choon (Representative of the PSO)
- Ms. Carol Tan (Representative of Transmission Licensee)
- Mr. Vijay Sirse (Representative of Retail Electricity Licensee)
- Ms. Ho Yin Shan (Representative of the market support services licensee)

The following RCP members did not support EMC’s recommendation:

- Mr. Teo Chin Hau (Representative of Generation Licensee)
- Mr. Tan Jun Jie (Representative of Generation Licensee)
- Mr. Tony Tan (Representative of Generation Licensee)
Minutes of 106th RCP Meeting – 17 January 2019

- Mr. Daniel Au (Representative of Retail Electricity Licensee)
- Mr. Sean Chan (Representative of Retail Electricity Licensee)
- Mr. Matthew Yeo (Representative of Wholesale Electricity Trader)

The following RCP member **abstained** from voting:
- Mr. Tan Chian Khong (Person experienced in Financial Matters in Singapore)

9.10.3 The RCP **unanimously** supported EMC’s recommendations to correct the erroneous default levy calculations, and elucidating definitions and timelines in the Market Rules.

(Mr. Vijay Sirse left the meeting)

10. **Appointment of Technical Working Group**
(Paper No. EMC/RCP/106/2019/08)

Ms. Jo Ong informed the Panel that the Technical Working Group (“TWG”) is an industry-resourced group, appointed by the RCP for a 2-year term, that assists the RCP in examining technical market rule changes (typically relating to Market Clearing Engine (“MCE”) formulation). The TWG comprises eight members as follows:

- Four experts based on nominations from Market Participants (“MPs”)
- One person nominated by the PSO
- One person nominated by the Transmission Licensee
- One MCE expert nominated by EMC
- Chairperson nominated by EMC

It was noted that the term of the current TWG has ended on 31 December 2018 and EMC had issued a call for nominations from MPs to form the next TWG. Seven nominations for experts nominated by MPs were received.

Based on the standardised CVs received, EMC evaluated the extent to which the nominees possess each of the competencies/experience in the TWG Selection Criteria. Greater weight was given to components that directly relate to dispatch and price discovery processes, as well as the MCE.

EMC recommended that the Panel appoint the following nominees of MPs to the next TWG:

**Four experts based on nominations from MPs**
- Mr. Calvin Quek
- Mr. Liu Jidong
- Ms. Lim Xingyi
- Mr. Desmond Sim
Minutes of 106th RCP Meeting – 17 January 2019

One Person nominated by the PSO
   • Mr. Loh Poh Soon

One Person nominated by the Transmission Licensee
   • Ms. Chu Xiao En

One MCE Expert nominated by EMC
   • Ms. Cherie Chen

Chairperson nominated by EMC
  • Ms. Veronica Rodriguez

10.1 Mr. Sean Chan said that Ms. Janice Bong’s scores for the criteria “Technical knowledge and understanding of the market and commercial issues” and “Complexity and cost structures faced by market participants” should be a 3 rather than 2 due to her experience in finance, optimisation, trading, and hedging/risk management. Mr. Sean Chan expressed that he does not support EMC’s recommendation unless the scoring is revised.

Ms. Jo Ong informed RCP that the RCP recommended EMC to list down the selection criteria including the corresponding assessed scores of each candidate against each criterion in a table for reference to the recommendations. However, the scoring can only be based on the resumes submitted.

10.2 The Chairman asked the RCP if they would like to review the scoring and proposed doing so by circulation. The RCP decided to proceed with the voting.

10.3 The Panel by majority vote supported the recommendation to appoint the following nominees of MPs to the next TWG:

   Four experts based on nominations from MPs
     • Mr. Calvin Quek
     • Mr. Liu Jidong
     • Ms. Lim Xingyi
     • Mr. Desmond Sim

   One Person nominated by the PSO
     • Mr. Loh Poh Soon

   One Person nominated by the Transmission Licensee
     • Ms. Chu Xiao En

   One MCE Expert nominated by EMC
     • Ms. Cherie Chen

   Chairperson nominated by EMC
     • Ms. Veronica Rodriguez
The following RCP members **supported** EMC’s recommendation:
- Mr. Henry Gan (Representative of EMC)
- Mr. Soh Yap Choon (Representative of the PSO)
- Mr. Teo Chin Hau (Representative of Generation Licensee)
- Mr. Tan Jun Jie (Representative of Generation Licensee)
- Mr. Tony Tan (Representative of Generation Licensee)
- Ms. Carol Tan (Representative of Transmission Licensee)
- Mr. Daniel Au (Representative of Retail Electricity Licensee)
- Mr. Matthew Yeo (Representative of Wholesale Electricity Trader)
- Mr. Tan Chian Khong (Person experienced in Financial Matters in Singapore)

The following RCP members did **not support** EMC’s recommendation:
- Mr. Sean Chan (Representative of Retail Electricity Licensee)

11. **Date of Next Meeting**

The 107th RCP Meeting will be held on Tuesday, 5 March 2019.

There being no other matters, the meeting ended at 1.30pm.

Toh Seong Wah  
Chairman

Minutes taken by:  
Angeline Tan  
Corporate Secretarial Executive