

RCP PAPER NO. : **EMC/RCP/107/2019/07**

SUBJECT : **RULES CHANGE PANEL WORK PLAN 2019/20**

FOR : **DISCUSSION AND DECISION**

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Executive Summary

This paper presents the proposed update of the 2-year Rules Change Panel (RCP) work plan, incorporating feedback from meeting with stakeholders from 04 January 2019 to 01 February 2019.

EMC recommends that the RCP discuss and agree on an updated work plan, and task EMC to monitor the progress of the approved work plan. The approved work plan is presented in Table 5 of section 6 of this paper.

1. Introduction

This paper takes stock of the progress made in the previous work plan approved in March 2018. It then presents the list of existing and new issues raised during the work plan consultation exercise, together with the corresponding rankings and comments made by various stakeholders. The proposed issues to be tackled over the next 2 years are then tabled for Rules Change Panel (RCP)'s discussion and approval.

2. RCP's Achievements: April 2018 – March 2019

2.1 Overview

At its 101st meeting in March 2018, the RCP agreed on the 2018/19 work plan and tasked EMC to monitor its progress. This work plan comprises 29 issues, with 12 to be addressed within the first 12 months (i.e. by March 2019).

Of the 12 issues, the RCP has completed work on **7** of them, including:

- Compensation for Load Registered Facilities Adversely Affected by Price Revision
- Publishing Additional Load Scenarios in the Forecast Schedules
- Validating Load Forecasts
- Templates for Banker's Guarantee and Standby Letters of Credit
- Publication of Offer Data
- Reduction of gate closure during forced outage events
- Restoration of Load Registered Facilities (LRFs) Activated to Provide Reserve

At the same time, significant progress has been made on **3** of these issues:

- **Review of Default Levy Arrangements** – The concept paper (CP76) was tabled at the 106th RCP meeting, where the Panel did not support EMC's recommendation to allocate the default levy only to net creditors, but supported correcting erroneous default levy calculations and clarifying the timelines in the current market rules. EMC is drafting the proposed modifications to give effect to the RCP's decision.
- **Review of credit support requirements in alignment with the retailer of last resort (ROLR) framework** – The concept paper (CP77) was tabled at the 106th RCP meeting, where the Panel supported setting credit support requirements based on maximum coverage and requested for further details on the options to address the second issue of insufficient credit support coverage due to the ROLR transfer lead time. EMC will report back to the RCP on the follow-ups at the 107th RCP meeting.
- **Review of Automatic Financial Penalty Scheme (AFPS)** – EMC had sought industry feedback on the additional issues to be addressed and is currently drafting a paper to address the issues received, which pertains to (i) expansion of exempted cases, (ii) minimum penalty value, and (iii) treatment of embedded generators' must-run quantity.

3. RCP Work Plan Prioritisation Exercise 2019

3.1 List of Issues for Prioritisation

Prior to the consultation meetings, EMC presented stakeholders with a list of 45¹ issues comprising 24 that were carried over from the previous work plan, 3 which were raised during the mid-year review conducted in September 2018, 17 that were newly raised by stakeholders, and

¹ Of which 2 issues have since been completed.

1 which was a matter arising tasked to be examined by the RCP. The latter three categories of new issues are briefly described below:

- **Minimum Stable Load (MSL) for Load Registered Facilities** – This proposal suggests modelling LRFs’ minimum curtailment capacity in the Market Clearing Engine (MCE) to reflect the on/off nature of some loads’ operations and correspondingly their curtailment capabilities. (Proposed by: Diamond Energy Merchants)
- **To remove the requirement to request for final consent before a planned outage** – This issue suggests removing the current requirement for MPs to request, and for PSO to provide, final consent between 4 to 5 hours before the scheduled time of a planned outage. (Proposed by: PSO)
- **To require an MP submitting a request for cancellation of facility registration to also state the intended effective date of cancellation** – This issue suggests for MPs to provide an indication of the intended date of cancellation when submitting a request to cancel their facility’s registration. (Proposed by: PSO)
- **Removal of RCP’s review of EMC Budget** – EMC is required to submit its budget annually to the RCP for review and comments, prior to submission to the EMA. This proposal suggests removing such review given that EMC’s current revenue regime already sets out the allowed revenue for 1 Apr 2018 to 30 Jun 2023. (Proposed by: EMC, Finance)
- **Review of Rules Change Panel composition to increase the number of independent representatives** – This proposal suggests increasing the proportion of independent representatives on the RCP for a more holistic approach in the rules change process. (Proposed by: Ohm Energy)
- **Guidelines for Forced Outage Events** – This issue suggests providing greater clarity on the conditions under which GRFs which had experienced forced outages are allowed to return to service. (Proposed by: YTL PowerSeraya)
- **Invalidation of offers following forced outages** – Currently, MPs are required to submit offer revisions to reflect the unavailability of their generators following forced outages. This proposal suggests for the MCE to automatically remove the offers of GRFs which have just experienced a forced outage so that such unavailability can be reflected more promptly in the market clearing outcomes. (Proposed by: EMC, Market Administration)
- **Price revision (re-run) to market price cap for periods with real-time load shedding** – This issue proposes for prices to be revised to the market price cap of \$4,500/MWh for periods in which real-time load shedding occurred so that prices reflect actual conditions. (Proposed by: Tuas Power Generation)
- **Price Revision (re-run) for periods whereby PSO issues overriding dispatch instructions** – This issue proposes that, if the PSO overrides dispatch instructions during a dispatch period, the prices for that period should be revised to reflect such instructions. (Proposed by: Tuas Power Generation)
- **Framework for determining compensation claims amount for MPs in compliance with PSO directions** – MPs which complied with a PSO-issued direction are allowed to seek compensation from the PSO. This proposal suggests setting out a framework and methodology for determining the compensation claim amounts to reduce uncertainty and administrative burden. (Proposed by: Senoko Energy)
- **Amendments to the StartGeneration used in the real-time schedule (RTS), and the first dispatch period of the short-term schedule (STS) and pre-dispatch schedule (PDS)** – The StartGeneration parameter is used in the MCE to indicate the approximate starting level of a GRF, for the purposes of determining its achievable energy output trajectory and qualifying it for regulation provision. This proposal suggests amending the fall-back values for StartGeneration to reduce occurrences when (i) the unavailability of the PSO network status

file results in providers being disqualified for regulation provision, and (ii) the unavailability of the RTS leads to the PDS failing to be produced. (Proposed by: EMC, Markets & Operations)

- **Tiered Structure for EMC Annual fees** – EMC charges an annual MP fee of \$10,000 per MP. This proposal suggests that the annual MP fee should be set differently for MPs of different trading volumes. (Proposed by: SilverCloud Energy)
- **Allow third parties to receive rebates under the Simplified Credit Scheme and Enhanced Central Intermediary Scheme (ECIS) for electricity export through SP Services** – SP Services currently pays consumers under the simplified credit scheme and ECIS directly for their excess injection. This proposal suggests allowing for the option of making payment to third parties instead. (Proposed by: SilverCloud Energy)
- **Proposed review of constraint violation penalty (CVP) structure** – This proposal suggests reviewing the stepwise CVP structure for reserve deficits to address the frequent contingency reserve shortfalls observed in 2018. (Proposed by: PacificLight Power/ Matters Arising)
- **Impact of Carbon Tax on Electricity** – This proposal suggests clarifying the impact of carbon tax on electricity bills. (Proposed by: MSD)
- **Holistic review of the current prudential requirement obligations and its enforcement process under the market rules** – This proposal suggests conducting a comprehensive review of the current prudential requirements. For MPs which had defaulted in payment, it is proposed that, as part of their remedial actions, they should be required to meet a lower allowable risk exposure threshold and higher credit support requirement. (Proposed by: PacificLight Energy)
- **Redeeming the full amount of an MP’s Banker’s Guarantees (BGs) upon default** – EMC is currently allowed to claim on an MP’s BG for amounts due and not paid by that MP. To reduce the operational costs and expenses incurred by EMC, this proposal suggests allowing EMC to claim the entire amount set out in an MP’s BG once that MP has defaulted in payment. (Proposed by: EMC, Markets & Operations)
- **Clarification of timeline in relation to the provision of replacement or additional credit support** – The timelines for the provision of replacement or additional credit support is proposed to be reviewed to clarify the applicable timelines and to ensure that the credit support held by EMC is sufficient should MPs fail to renew their BGs. (Proposed by: EMC, Market Administration)
- **Review sufficiency of credit support taking into account price volatility** – The current credit support requirement is determined based on an MP’s average daily trading exposure in the past 90 days. This issue suggests that the credit support requirement be amended to account for recent price volatility and volume changes. (Proposed by: EMC, Market Administration)
- **Review allowable remedies for default events** – The allowable remedies for events of default is proposed to be reviewed to ensure the remedies allowed are reasonable. (Proposed by: EMC, Market Administration)
- **Compensation guidelines for interruptible load facilities interrupted for prolonged duration** – Arising from discussions at the 105th RCP meeting, this proposal suggests examining an appropriate compensation calculation methodology to serve as guidelines for LRFs which have been interrupted for reserve provision for a prolonged duration. (Matters Arising)

3.2 Consultation Process

Over a four-week period from 04 January 2019 to 01 February 2019, EMC met up with various market participants² (MPs), the PSO and SP Services to refine the scope of the issues, and rate each issue according to its importance and urgency. Stakeholders could also vote to remove issues from the list and provide their qualitative comments. Section 4 below summarises stakeholders’ rankings.

The following message emerged from the consultation process:

- EMC should continue to work on issues where work has already commenced, with an aim to complete them as soon as possible before embarking on new issues.
- While some of the issues raised are not within the purview of the RCP, and hence proposed to be removed, they reflect concerns and issues faced by the industry. EMC proposes that the RCP refer these issues to the EMA, and remove these issues from the RCP’s work plan. The issues are listed in Table 1.

Table 1: Issues proposed to be referred to the EMA

| Issue No. | Issue Title |
|-----------|--|
| 37 | ▪ Allow third parties to receive rebates under the Simplified Credit Scheme for electricity export through SP Services |
| 39 | ▪ Impact of Carbon Tax on Electricity |

- Since there is an ongoing EMA directive³ which would amend the probability of failure methodology, **Issue 14 on Probability of Failure Methodology** is proposed to be removed to avoid overlapping workstreams.

4. Ranking Methodology Adopted

Two methods to determine the overall ranking of each issue are presented for the RCP’s consideration:

- **Simple Average Methodology:** Averages scores for ‘importance’ and ‘urgency’ of each issue across all stakeholders.
- **Group-Weighted Methodology:** Averages scores for ‘importance’ and urgency’ of each issue across each of the 4 groups of representatives/stakeholders (generation licensees, retail licensees, wholesale trader licensees, and service providers). The average of these 4 scores is then calculated.

² A total of 33 market participants were involved, namely Air Liquide Singapore, Changi Mega Solar, Exxonmobil Asia Pacific, GreenCity Energy, Hyflux Energy, Keppel Electric, Keppel Merlimau Cogen, Keppel Seghers Tuas Waste-To-Energy Plant, MSD International Gmbh (Singapore Branch), National Environment Agency, Ohm Energy, PacificLight Energy, PacificLight Power, Red Dot Power, Sembcorp Cogen, Sembcorp Power, Sembcorp Solar Singapore, Senoko Energy, Senoko Energy Supply, Senoko Waste-To-Energy, Seraya Energy, Shell Eastern Petroleum, SilverCloud Energy, Singapore District Cooling, SP PowerAssets, Sun Electric Energy Assets, Sun Electric Power, TP Utilities, Tuas Power Generation, Tuas Power Supply, TuasOne, Tuaspring and YTL PowerSeraya. Singapore Refining Company did not participate but provided comments on one of the issues.

³ EMA’s Final Determination Paper on “Intermittency Pricing Mechanism for Intermittent Generation Sources in the NEMS”, dated 30 October 2018. The EMA indicated that the revised methodology will be implemented around 2020. Refer to: <https://www.ema.gov.sg/cmsmedia/Final%20Determination%20Paper%20-%20Intermittency%20Pricing%20Mechanism%20vf.pdf>

Table 2 overleaf summarises the ranking results under each of these methodologies, together with an indication of whether work has commenced and the number of stakeholders who proposed to remove the issue, with a detailed breakdown of the ranking results shown in Annex 1. Note that the group-weighted average rank is “N.A.” when an issue is not rated by all stakeholders within a given group of representatives/stakeholders.

Table 2: Work Plan Issue by Rank⁴

| Issue No. | Issue Title | Rank (Simple Average) | Rank (Group-Weighted) | Work Started ? | Propose to Remove | Summary of Reasons for Removal |
|------------------------|---|-----------------------|-----------------------|----------------|-------------------|---|
| On-going Issues | | | | | | |
| 1 | Review of Automatic Financial Penalty Scheme (AFPS) & related issues raised in the 2017 Work Plan Prioritisation Exercise | N.A. | N.A. | Y | N.A. | N.A. |
| 2 | Imposition of Minimum Net Tangible Asset as a Condition of Participation for Retailers | N.A. | N.A. | Y | N.A. | N.A. |
| 3 | Reduction of gate closure during forced outage events | N.A. | N.A. | Y | N.A. | N.A. |
| 4 | Review of Default Levy Arrangements | N.A. | N.A. | Y | N.A. | N.A. |
| 5 | Review of credit support requirements in alignment with the retailer of last resort framework | N.A. | N.A. | Y | N.A. | N.A. |
| 7 | Load restoration command from PSO to be in sync with the periods for which loads offered to provide reserve | N.A. | N.A. | Y | N.A. | N.A. |
| Other Issues | | | | | | |
| 30 | Guidelines for Forced Outage Events | 1 | N.A. | N | 1 | - Proposal not necessary as the authority of the PSO is already set out in the current market rules and SOM. |
| 31 | Invalidation of offers following forced outages | 2 | 1 | N | 0 | |
| 38 | Proposed review of constraint violation penalty (CVP) structure | 3 | 2 | N | 0 | |
| 40 | Holistic review of the current prudential requirement obligations and its enforcement process under the market rules | 4 | 4 | N | 0 | |
| 26 | To remove the requirement to request for final consent before a planned outage | 5 | 3 | N | 0 | |
| 32 | Price revision (re-run) to market price cap for periods with real-time load shedding | 6 | N.A. | N | 2 | - The proposal may affect the trustworthiness of our market. - The market rules already set out the conditions for price revision to be carried out. |

⁴ Arising from the RCP's decision at its 78th meeting, ongoing issues need not be ranked.

| Issue No. | Issue Title | Rank (Simple Average) | Rank (Group-Weighted) | Work Started ? | Propose to Remove | Summary of Reasons for Removal |
|-----------|---|-----------------------|-----------------------|----------------|-------------------|---|
| 43 | Review sufficiency of credit support taking into account price volatility | 7 | 7 | N | 0 | |
| 33 | Price Revision (re-run) for periods whereby PSO issues overriding dispatch instructions | 8 | N.A. | N | 1 | - The market rules already set out the conditions for price revision to be carried out. |
| 42 | Clarification of timeline in relation to the provision of replacement or additional credit support | 9 | 9 | N | 0 | |
| 34 | Framework for determining compensation claims amount for MPs in compliance with PSO directions | 10 | 6 | N | 0 | |
| 13 | Provision of Real-time Estimates of the Reserve Responsibility Share (RRS) for Each GRF | 11 | 14 | N | 0 | |
| 14 | Probability of Failure Methodology | 12 | N.A. | N | 3 | - There is a separate EMA workstream for Intermittency Pricing Mechanism which would change the probability of failure methodology. |
| 37 | Allow third parties to receive rebates under the Simplified Credit Scheme for electricity export through SP Services | 13 | 8 | N | 12 | - Not under the purview of the market rules. - Should raise with SP Services or EMA. |
| 44 | Review allowable remedies for default events | 14 | 11 | N | 0 | |
| 6 | Review of the requirement for registration as commissioning generation facility for generation settlement facilities, except for intermittent generation facilities of aggregate name-plate rating 10MW or more | 15 | 5 | N | 0 | |
| 35 | Amendments to the StartGeneration used in the real-time schedule (RTS), and the first dispatch period of the short-term schedule (STS) and pre-dispatch schedule (PDS) | 16 | 24 | N | 0 | |
| 45 | Compensation guidelines for interruptible load facilities interrupted for prolonged duration | 17 | 16 | N | 0 | |

| Issue No. | Issue Title | Rank (Simple Average) | Rank (Group-Weighted) | Work Started ? | Propose to Remove | Summary of Reasons for Removal |
|-----------|---|-----------------------|-----------------------|----------------|-------------------|---|
| 8 | Proposed change in frequency of Pre-dispatch Schedule | 18 | N.A. | N | 1 | - RC352 already introduces additional scenarios for STS, no need to create additional PDS which will incur costs and require system changes. |
| 10 | Adjustment for regulation charges and price neutralisation after final settlement | 19 | 13 | N | 0 | |
| 18 | Treatment of consecutive trading periods for demand response events | 20 | 17 | N | 0 | |
| 11 | Review CVP associated with violation of Type 2 Artificial Lines | 21 | 20 | N | 0 | |
| 41 | Redeeming the full amount of an MP's Banker's Guarantees (BGs) upon default | 22 | 19 | N | 0 | |
| 27 | To require an MP submitting a request for cancellation of facility registration to also state the intended effective date of cancellation | 23 | 10 | N | 0 | |
| 36 | Tiered Structure for EMC Annual fees | 24 | 15 | N | 8 | - Annual MP fee is set to cover fixed costs of an MP's participation, which do not vary with their trading volume. - The proposal would further lower the barriers of entry, which could lead to higher risks of default if this attracts entry of less creditworthy entrants. |
| 16 | Removal of the first-approach of Constraint Violation Penalties (CVP) rerun | 25 | N.A. | N | 1 | - EMC should still check with PSO as the transmission equipment capacity could be derated for operational reasons. |
| 19 | Removal of Singapore Government Treasury bills as acceptable credit support | 26 | 22 | N | 1 | - Should retain as an option for new MPs. |
| 15 | Improvement of real-time information flow regarding unplanned outages and return to service | 26 | N.A. | N | 3 | - Generation availability already published in the AGOP. - Current information is sufficient. |
| 12 | Regulation Effectiveness Factor | 28 | 12 | N | 0 | |
| 21 | Review of the timeline for meter data investigation and adjustments after notice of dissent has been raised | 29 | 21 | N | 0 | |
| 25 | Minimum Stable Load (MSL) for Load Registered Facilities | 30 | N.A. | N | 1 | - May not work for LRFs which comprises aggregated loads. |

| Issue No. | Issue Title | Rank (Simple Average) | Rank (Group-Weighted) | Work Started ? | Propose to Remove | Summary of Reasons for Removal |
|-----------|---|-----------------------|-----------------------|----------------|-------------------|---|
| 28 | Removal of RCP's review of EMC Budget | 31 | N.A. | N | 1 | - The RCP's review will ensure resources are properly allocated to key projects. |
| 17 | Removal of price warning advisory notices | 32 | N.A. | N | 5 | - MPs can choose not to receive such advisory notices. |
| 9 | Provisions regarding settlement bank and settlement account | 33 | 23 | N | 0 | |
| 22 | Review the composition of the market surveillance and compliance panel (MSCP) | 34 | 26 | N | 10 | - Current MSCP structure and expertise are sufficient. - The MSCP does not have jurisdiction over electricity futures. |
| 29 | Review of Rules Change Panel composition to increase the number of independent representatives | 35 | 25 | N | 0 | |
| 23 | Harmonisation of the AFP mechanism and Demand Response Penalty Regime for Demand Response providers | 36 | N.A. | N | 8 | - Should refer this proposal to EMA since DR was introduced by EMA. - Equitable for all loads and generators to pay AFP. - Not aligned with market design principles. |
| 20 | Invalid load ramping constraints in the Rules Modification for EMA's "Implementing Demand Response in the National Electricity Market of Singapore" | 37 | N.A. | N | 2 | - The industry had been consulted on DR, so this review is not necessary. |
| 24 | Modelling of on-site ambient temperature into the MCE such that GTs/CCPs' maximum capacity is adjusted dynamically | 38 | 18 | N | 3 | - Benefits do not seem to exceed the expected costs. - Do not think there is merit in this proposal. |
| 39 | Impact of Carbon Tax on Electricity | 39 | N.A. | N | 18 | - Not under the purview of the market rules / RCP. |

5. Approach to Prioritisation

EMC recommends that the RCP consider the following in its prioritisation process:

- Ranking received from stakeholders – The ranking by stakeholders indicates which issues are likely to provide the most impact in enhancing the performance of the market.
- On-going issues – As considerable amount of effort was already invested in the on-going issues, it would be sensible to continue with these work streams.
- Issues to be removed (shaded in orange in Table 2) – Issues listed in Table 1 are not under the purview of the RCP and should be referred to the EMA. Further, Issue 14 is proposed to be removed given the ongoing workstream arising from an EMA directive.
- Stakeholders had proposed that certain issues be removed from the work plan, along with their reasons. It would be useful for the RCP to deliberate if these issues should be removed from the work plan.

EMC proposes that **10 issues** be addressed in the next 12 months (i.e. from April 2019 to March 2020).

6. Conclusions and Decisions at the 107th RCP Meeting

The Panel, having considered the list of 43⁵ issues and EMC's recommendations, made the following decisions:

(i) Issues to be referred to the EMA

The Panel unanimously agreed to refer the issues set out in Table 1 (namely Issues 37 and 39) to the EMA, and remove them from the work plan, since the issues are not within the RCP's purview.

(ii) Other issues to be removed

The Panel also agreed to remove the following issues from the work plan, given the following considerations:

Table 3: Other issues removed from the work plan

| Issue No. | Issue Title | RCP's Considerations |
|-----------|---|--|
| 30 | Guidelines for Forced Outage Events | PSO to arrange for information sharing sessions to provide more clarity on the conditions for GRFs to return to service after a forced outage. |
| 14 | Probability of Failure Methodology | Avoid overlapping workstreams given there is already an EMA directive which will affect the probability of failure methodology. |
| 36 | Tiered Structure for EMC Annual fees | Reasons for removal given by stakeholders. |
| 22 | Review the composition of the market surveillance and compliance panel (MSCP) | |
| 23 | Harmonisation of the AFP mechanism and Demand Response Penalty Regime for Demand Response providers | |

⁵ While a total of 45 issues were presented in Table 2, 2 of the issues (*Issue 3: Reduction of gate closure during forced outage events*, and *Issue 7: Load restoration command from PSO to be in sync with the periods for which loads offered to provide reserve*) were tabled and completed by the RCP at its 107th meeting prior to the work plan discussion.

(iii) Issues to be combined

The Panel noted that several issues on the work plan relate to similar topics, and suggested for these issues, as set out in Table 4, to be addressed together, where appropriate.

Table 4: Issues to be combined

| Topic | Issue No. | Issue Title |
|--------------------------------|-----------|--|
| Price revision provisions | 32 | Price revision (re-run) to market price cap for periods with real-time load shedding |
| | 33 | Price Revision (re-run) for periods whereby PSO issues overriding dispatch instructions |
| Compensation framework | 34 | Framework for determining compensation claims amount for MPs in compliance with PSO directions |
| | 45 | Compensation guidelines for interruptible load facilities interrupted for prolonged duration |
| Prudential requirement setting | 40 | Holistic review of the current prudential requirement obligations and its enforcement process under the market rules |
| | 43 | Review sufficiency of credit support taking into account price volatility |

(iv) Updated Work Plan 2019/2020

With the issues in Table 4 combined, the RCP requests for 11 issues to be addressed in the next 12 months.

Given the above decisions, the RCP agreed on the updated work plan set out in Table 5 below and tasked EMC to monitor the progress of this work plan.

Table 5: Updated Rules Change Work Plan from April 2019 to March 2021

| Expected commencement / completion | Issue No. | Issue Title |
|---|--|---|
| Within the next 12 months (by Mar 2020) | 1 | Review of Automatic Financial Penalty Scheme (AFPS) & related issues raised in the 2017 Work Plan Prioritisation Exercise |
| | 2 | Imposition of Minimum Net Tangible Asset as a Condition of Participation for Retailers |
| | 4 | Review of Default Levy Arrangements |
| | 5 | Review of credit support requirements in alignment with the retailer of last resort framework |
| | 31 | Invalidation of offers following forced outages |
| | 38 | Proposed review of constraint violation penalty (CVP) structure |
| | 40 | Holistic review of the current prudential requirement obligations and its enforcement process under the market rules |
| | 43 | Review sufficiency of credit support taking into account price volatility |
| | 26 | To remove the requirement to request for final consent before a planned outage |
| | 32 | Price revision (re-run) to market price cap for periods with real-time load shedding |
| | 33 | Price Revision (re-run) for periods whereby PSO issues overriding dispatch instructions |
| 42 | Clarification of timeline in relation to the provision of replacement or additional credit support | |
| 34 | Framework for determining compensation claims amount for MPs in compliance with PSO directions | |
| 45 | Compensation guidelines for interruptible load facilities interrupted for prolonged duration | |

| Expected commencement / completion | Issue No. | Issue Title |
|-------------------------------------|-----------|---|
| Within 13 - 24 months (by Mar 2021) | 13 | Provision of Real-time Estimates of the Reserve Responsibility Share (RRS) for Each GRF |
| | 44 | Review allowable remedies for default events |
| | 6 | Review of the requirement for registration as commissioning generation facility for generation settlement facilities, except for intermittent generation facilities of aggregate name-plate rating 10MW or more |
| | 35 | Amendments to the StartGeneration used in the real-time schedule (RTS), and the first dispatch period of the short-term schedule (STS) and pre-dispatch schedule (PDS) |
| | 8 | Proposed change in frequency of Pre-dispatch Schedule |
| | 10 | Adjustment for regulation charges and price neutralisation after final settlement |
| | 18 | Treatment of consecutive trading periods for demand response events |
| | 11 | Review CVP associated with violation of Type 2 Artificial Lines |
| | 41 | Redeeming the full amount of an MP's Banker's Guarantees (BGs) upon default |
| | 27 | To require an MP submitting a request for cancellation of facility registration to also state the intended effective date of cancellation |
| | 16 | Removal of the first-approach of Constraint Violation Penalties (CVP) rerun |
| | 19 | Removal of Singapore Government Treasury bills as acceptable credit support |
| | 15 | Improvement of real-time information flow regarding unplanned outages and return to service |
| | 12 | Regulation Effectiveness Factor |
| | 21 | Review of the timeline for meter data investigation and adjustments after notice of dissent has been raised |
| | 25 | Minimum Stable Load (MSL) for Load Registered Facilities |
| | 28 | Removal of RCP's review of EMC Budget |
| | 17 | Removal of price warning advisory notices |
| | 9 | Provisions regarding settlement bank and settlement account |
| | 29 | Review of Rules Change Panel composition to increase the number of independent representatives |
| | 20 | Invalid load ramping constraints in the Rules Modification for EMA's "Implementing Demand Response in the National Electricity Market of Singapore" |
| | 24 | Modelling of on-site ambient temperature into the MCE such that GTs/CCPs' maximum capacity is adjusted dynamically |

Annex 1: Ranking Results by Key Stakeholders

Each stakeholder was asked for his view on the importance and urgency of each of the issues where work has not started. A score of 3 corresponds to “High”, 2 corresponds to “Medium”, and 1 corresponds to “Low”.

In the Grand Total column, the number in front of the bracket shows the ranking score and the number in the bracket gives the number of stakeholders providing that ranking score. For example, 1(7) means 7 stakeholders have ranked this item as 1 or “Low”.

The overall average score arising from each method is represented in the last 2 columns of Table 6.

Table 6: Scoring of issues by stakeholders

| Issue No. | Issue Title | Grand Total | Overall Score (Simple Average Method) | Overall Score (Group-weighted Average Method ⁶) |
|-----------|---|--|--|--|
| 6 | Review of the requirement for registration as commissioning generation facility for generation settlement facilities, except for intermittent generation facilities of aggregate name-plate rating 10MW or more Importance Urgency | 1(16), 2(3), 3(8) 1(16), 2(3), 3(8) | 1.704 | 2.256 |
| 8 | Proposed change in frequency of Pre-dispatch Schedule Importance Urgency | 1(16), 2(5), 3(5) 1(20), 2(1), 3(5) | 1.500 | N.A. |
| 9 | Provisions regarding settlement bank and settlement account Importance Urgency | 1(22), 2(4), 3(2) 1(22), 2(5), 3(1) | 1.268 | 1.393 |
| 10 | Adjustment for regulation charges and price neutralisation after final settlement Importance Urgency | 1(20), 2(3), 3(6) 1(21), 2(3), 3(5) | 1.483 | 1.688 |
| 11 | Review CVP associated with violation of Type 2 Artificial Lines Importance Urgency | 1(13), 2(12), 3(1) 1(15), 2(11), 3(0) | 1.481 | 1.482 |

⁶ Note: The group-weighted average score is “N.A.” when there are issues which are not rated by one or more groups.

| Issue No. | Issue Title | Grand Total | Overall Score (Simple Average Method) | Overall Score (Group-weighted Average Method ⁶) |
|-----------|---|---|--|--|
| 12 | Regulation Effectiveness Factor Importance Urgency | 1(19), 2(4), 3(4) 1(21), 2(3), 3(3) | 1.389 | 1.822 |
| 13 | Provision of Real-time Estimates of the Reserve Responsibility Share (RRS) for Each GRF Importance Urgency | 1(7), 2(10), 3(9) 1(13), 2(6), 3(7) | 1.923 | 1.640 |
| 14 | Probability of Failure Methodology Importance Urgency | 1(12), 2(4), 3(9) 1(13), 2(4), 3(8) | 1.840 | N.A. |
| 15 | Improvement of real-time information flow regarding unplanned outages and return to service Importance Urgency | 1(19), 2(4), 3(4) 1(21), 2(2), 3(4) | 1.407 | N.A. |
| 16 | Removal of the first-approach of Constraint Violation Penalties (CVP) rerun Importance Urgency | 1(14), 2(10), 3(1) 1(16), 2(9), 3(0) | 1.420 | N.A. |
| 17 | Removal of price warning advisory notices Importance Urgency | 1(19), 2(4), 3(2) 1(19), 2(4), 3(2) | 1.320 | N.A. |
| 18 | Treatment of consecutive trading periods for demand response events Importance Urgency | 1(18), 2(6), 3(4) 1(18), 2(7), 3(3) | 1.482 | 1.557 |
| 19 | Removal of Singapore Government Treasury bills as acceptable credit support Importance Urgency | 1(19), 2(5), 3(3) 1(19), 2(5), 3(3) | 1.407 | 1.440 |
| 20 | Invalid load ramping constraints in the Rules Modification for EMA's | | 1.180 | N.A. |

| Issue No. | Issue Title | Grand Total | Overall Score (Simple Average Method) | Overall Score (Group-weighted Average Method ⁶) |
|-----------|--|---|--|--|
| | “Implementing Demand Response in the National Electricity Market of Singapore” Importance Urgency | 1(20), 2(4), 3(1) 1(22), 2(3), 3(0) | | |
| 21 | Review of the timeline for meter data investigation and adjustments after notice of dissent has been raised Importance Urgency | 1(20), 2(4), 3(3) 1(20), 2(5), 3(2) | 1.352 | 1.478 |
| 22 | Review the composition of the market surveillance and compliance panel (MSCP) Importance Urgency | 1(22), 2(2), 3(2) 1(22), 2(3), 3(1) | 1.212 | 1.143 |
| 23 | Harmonisation of the AFP mechanism and Demand Response Penalty Regime for Demand Response providers Importance Urgency | 1(24), 2(1), 3(2) 1(24), 2(1), 3(2) | 1.185 | N.A. |
| 24 | Modelling of on-site ambient temperature into the MCE such that GTs/CCPs’ maximum capacity is adjusted dynamically Importance Urgency | 1(22), 2(3), 3(1) 1(24), 2(1), 3(1) | 1.154 | 1.551 |
| 25 | Minimum Stable Load (MSL) for Load Registered Facilities Importance Urgency | 1(19), 2(4), 3(3) 1(21), 2(2), 3(3) | 1.346 | N.A. |
| 26 | To remove the requirement to request for final consent before a planned outage Importance Urgency | 1(3), 2(9), 3(14) 1(3), 2(13), 3(10) | 2.346 | 2.426 |
| 27 | To require an MP submitting a request for cancellation of facility registration to also state the intended effective date of cancellation | | 1.444 | 1.849 |

| Issue No. | Issue Title | Grand Total | Overall Score (Simple Average Method) | Overall Score (Group-weighted Average Method ⁶) |
|-----------|---|--|--|--|
| | Importance Urgency | 1(16), 2(10), 3(1) 1(16), 2(10), 3(1) | | |
| 28 | Removal of RCP's review of EMC Budget Importance Urgency | 1(20), 2(1), 3(4) 1(21), 2(0), 3(4) | 1.340 | N.A. |
| 29 | Review of Rules Change Panel composition to increase the number of independent representatives Importance Urgency | 1(23), 2(2), 3(2) 1(24), 2(1), 3(2) | 1.204 | 1.259 |
| 30 | Guidelines for Forced Outage Events Importance Urgency | 1(1), 2(4), 3(20) 1(1), 2(4), 3(20) | 2.760 | N.A. |
| 31 | Invalidation of offers following forced outages Importance Urgency | 1(3), 2(6), 3(21) 1(4), 2(10), 3(16) | 2.500 | 2.652 |
| 32 | Price revision (re-run) to market price cap for periods with real-time load shedding Importance Urgency | 1(8), 2(3), 3(17) 1(9), 2(6), 3(13) | 2.232 | N.A. |
| 33 | Price Revision (re-run) for periods whereby PSO issues overriding dispatch instructions Importance Urgency | 1(8), 2(5), 3(14) 1(13), 2(1), 3(13) | 2.111 | N.A. |
| 34 | Framework for determining compensation claims amount for MPs in compliance with PSO directions Importance Urgency | 1(11), 2(6), 3(11) 1(12), 2(5), 3(11) | 1.982 | 2.233 |
| 35 | Amendments to the StartGeneration used in the real-time schedule (RTS), and the first dispatch period of the short-term schedule (STS) and pre-dispatch schedule (PDS) | | 1.635 | 1.379 |

| Issue No. | Issue Title | Grand Total | Overall Score (Simple Average Method) | Overall Score (Group-weighted Average Method ⁶) |
|-----------|--|--|--|--|
| | Importance Urgency | 1(12), 2(12), 3(2) 1(12), 2(11), 3(3) | | |
| 36 | Tiered Structure for EMC Annual fees Importance Urgency | 1(25), 2(2), 3(6) 1(25), 2(2), 3(6) | 1.424 | 1.603 |
| 37 | Allow third parties to receive rebates under the Simplified Credit Scheme for electricity export through SP Services Importance Urgency | 1(16), 2(2), 3(10) 1(16), 2(2), 3(10) | 1.786 | 2.049 |
| 38 | Proposed review of constraint violation penalty (CVP) structure Importance Urgency | 1(4), 2(4), 3(18) 1(5), 2(7), 3(14) | 2.442 | 2.627 |
| 39 | Impact of Carbon Tax on Electricity Importance Urgency | 1(18), 2(1), 3(1) 1(18), 2(1), 3(1) | 1.150 | N.A. |
| 40 | Holistic review of the current prudential requirement obligations and its enforcement process under the market rules Importance Urgency | 1(2), 2(10), 3(17) 1(4), 2(12), 3(13) | 2.414 | 2.416 |
| 41 | Redeeming the full amount of an MP's Banker's Guarantees (BGs) upon default Importance Urgency | 1(16), 2(7), 3(3) 1(17), 2(7), 3(2) | 1.462 | 1.511 |
| 42 | Clarification of timeline in relation to the provision of replacement or additional credit support Importance Urgency | 1(3), 2(18), 3(7) 1(8), 2(13), 3(7) | 2.054 | 1.995 |
| 43 | Review sufficiency of credit support taking into account price volatility | | 2.190 | 2.152 |

| Issue No. | Issue Title | Grand Total | Overall Score (Simple Average Method) | Overall Score (Group-weighted Average Method ⁶) |
|-----------|--|--|--|--|
| | Importance Urgency | 1(8), 2(7), 3(14) 1(9), 2(6), 3(14) | | |
| 44 | Review allowable remedies for default events Importance Urgency | 1(14), 2(7), 3(7) 1(16), 2(5), 3(7) | 1.714 | 1.833 |
| 45 | Compensation guidelines for interruptible load facilities interrupted for prolonged duration Importance Urgency | 1(18), 2(4), 3(5) 1(18), 2(4), 3(5) | 1.519 | 1.589 |