

**MINUTES OF THE RULES CHANGE PANEL
144th MEETING
HELD ON THURSDAY, 14 NOVEMBER 2024 AT 10.00AM
AT ENERGY MARKET CO. PTE LTD
4 SHENTON WAY #03-01
SGX CENTRE 2, SINGAPORE 068807**

Present:	Toh Seong Wah (Chairman) Soh Yap Choon Andrew Tan Wong Yew Chung Fong Yeng Keong Dallon Kay	Henry Gan Sherman Toh Matthijs Jan Guichelaar Cheong Zhen Siong Teo Chin Hau
Absent with Apologies:	Calvin Quek Dr Toh Mun Heng	Koay Yi Jing
In Attendance: (EMC)	Poa Tiong Siaw Lim Chern Yuen Vincent Wise	Li Zhenhui Fernanda Tham Reuben Ngiau

	Minutes of 144 th RCP Meeting – 14 November 2024	Action
1.	Notice of Meeting The Chairman called the meeting to order at 10.06am. The Notice and Agenda of the meeting were taken as read.	
2.	Confirmation of Minutes of the 143rd Rules Change Panel Meeting The Minutes of the 143 rd Rules Change Panel (“RCP”) meeting, held on 19 September 2024, were approved by the RCP.	
3.	Matters Arising from 143rd RCP Meeting Mr Wise presented the various credit support instruments’ turnaround time relative to the market’s settlement turnaround time, as requested by the Panel at the 143 rd RCP meeting. Mr Vincent Wise informed the Panel that the rule changes arising from RC389: Review of the Forms of Credit Support in Singapore Wholesale Electricity Market have been approved by the EMA.	
3.	Update of Monitoring List, Summary of Outstanding Rules Change Submissions, and RCP Work Plan Status Update	
3.1	Mr Li Zhenhui presented the Update of Monitoring List, Rule Change Submission, and RCP Work Plan Status Update.	
3.2	Chairman asked how the multiple incoming EMA’s directed market changes would affect the progress of the RCP work plan	

	<p>given that the EMC resources that support the RCP Work Plan projects are the same required for EMA-directed projects.</p> <p>Mr Li responded that impacts will vary on a case-by-case basis, depending on the nature of the directions.</p> <p>Mr Poa clarified that the impact of limited resources will be felt on the progress on the RCP workplan if separate EMA directions must be met at the same time. To address challenges from this, EMC will first review if there are any overlaps between the RCP Work Plan and EMA directed changes during the Rule Change Work Plan Prioritisation Exercise. Resourcing concerns will be flagged out for discussion. Where necessary, additional resources will have to be sought from the EMA.</p>	
4.	CP98: Registration of Facilities Connecting to the Distribution Network	
4.1	Mr Lim Chern Yuen presented the paper on the Registration of Facilities Connecting to the Distribution Network. Mr Lim shared that the concept paper assesses whether the PSO's advice on facilities connecting to the distribution network is required.	
4.2	<p>Mr Wong Yew Chung enquired whether it is EMC's role to approve of facility registrations.</p> <p>Mr Lim clarified that under the Market Rules, EMC will require the applicant to furnish relevant documents that reflect those requirements with other relevant stakeholders for this facility's registration had been sought.</p> <p>Mr Wong further asked if EMC conducts further assessments on any other criteria for registration.</p> <p>Mr Lim and Mr Poa Tiong Siaw clarified that EMC does not perform any physical evaluation. Instead, EMC checks if all the appropriate documents have been furnished and relies on them as evidence that all necessary requirements with the relevant stakeholders such as the Transmission Licensee or the Market Services Support Licensee have been met.</p> <p>Mr Wong sought to clarify the PSO's comment that the PSO deems the Transmission Licensee's checks to be sufficient to ensure no adverse impact on the transmission network.</p> <p>Mr Soh Yap Choon clarified that this is only for connections to the distribution network.</p> <p>Mr Soh further clarified that the PSO is involved in two parts of the facility registration process. First, the PSO assesses whether any incoming facility poses a threat to the reliability and security of the PSO controlled system (ie for facility connect at transmission network voltage level of 66kV and above). The PSO has no visibility of the distribution network (ie 22kV and below), and therefore deemed that the Transmission Licensee's checks on the facilities seeking connection to distribution</p>	

	<p>network are sufficient. Second, the PSO assesses the facility's technical specifications, such as its capacity and ramp rates. For this second part, PSO will continue to assess the technical specifications for facilities connected at both the transmission and distribution network.</p> <p>Mr Sherman Toh added that all applicants, be it a consumer or a generator, would need to submit an application to the Transmission Licensee to connect to the grid.</p>	
4.3	<p>Mr Lim concluded that:</p> <ol style="list-style-type: none"> EMC is required by the Market Rules to seek the PSO's advice on whether a facility poses a threat to the reliability or security of the transmission system before registering a facility; EMC has learnt from the PSO that for facilities connecting to the distribution network, the analysis and studies conducted by the Transmission Licensee under the Transmission Code <u>are sufficient</u> to ensure that such facilities pose no threat to the reliability or security of the transmission system; and Therefore, <u>EMC proposes to amend the market rule requiring EMC to seek the PSO's advice – to <u>exclude facilities connecting to the distribution network</u>.</u> <p>Hence, EMC recommends that the RCP <u>support</u> EMC's proposal.</p> <p>The RCP unanimously supported the EMC's recommendation.</p>	
5.	CP96: Publication of TPC Information	
5.1	Mr Vincent Wise recapped that CP96 was discussed at the 141 st RCP meeting, where the RCP supported a list of information related to the Temporary Price Cap ("TPC") for publishing, and tasked EMC to assess the methodology for publishing the information. The updated paper investigates the methodology to achieve this.	
5.2	Mr Wise shared that the methodology can be divided into two parts, the first relating to the publication of historical and real-time TPC-related information, and the second being the publication of forecasted TPC-related information.	
5.3	On the first part, Mr Wise shared that the existing methodology to generate USEP and RUSEP is fit for purpose and can be extended to the publication of real-time and historical Primary Reserve, Contingency Reserve, Regulation and MNN Prices that are uncapped by the TPC.	
5.4	On the second portion, Mr Wise shared two options for publishing forecasted TPC-related information, namely:	

	<p>1) Option 1: Projected Moving Average Prices (“MAP”), which involves providing only forecasted MAP to allow inference of potential TPC activations/de-activations (“Option 1”)</p> <p>2) Option 2: Embedding the TPC Mechanism into Forecast Runs, where TPC logic is incorporated into forecast runs, enabling the publication of product prices capped/uncapped by the TPC and the TPC Status for forecast periods (“Option 2”)</p> <p>Mr Wise presented the merits between Options 1 and 2. Mr Wise shared that while Option 2 provides more information, it will result in inconsistencies as the Short-Term Schedule (“STS”) and Pre-Dispatch Schedule (“PDS”) are generated at different frequencies. The results of the STS and PDS may differ. The inconsistency is more obvious in Option 2 as the STS may forecast an impending TPC activation, but not in the PDS.</p> <p>Mr Wise noted that the Option 2’s inconsistencies can be remedied with further study; but any remedy would impose additional stress on EMC’s systems and increase implementation costs.</p> <p>Mr Dallan Kay queried on how the system will be further stressed if EMC implements remedies for Option 2. Mr Wise referred to a remedy, where STS results will frequently override results of the PDS if there is an inconsistency. This will then result in increased system stress due to the overriding process.</p> <p>Mr Guichelaar queried the necessity of overriding PDS results and suggested the data published on EMC’s website (or on WebServices) can adjust figures from the STS and PDS based on TPC logic without embedding the TPC logic in the STS and PDS. Mr Wise responded that this can be further explored.</p>	
5.5	<p>Mr Matthijs Jan Guichelaar asked if this information will be available via WebServices.</p> <p>Mr Wise responded that the paper focuses on the methodology which precedes implementation details such as WebServices.</p> <p>Mr Henry Gan also clarified that EMC understands market participants’ needs for data via WebServices but these requirements are subject to cost approval by the EMA.</p> <p>Mr Kay added that Option 1 only makes sense if it is also provided via WebServices, not just on EMC’s website.</p>	
5.6	<p>Mr Guichelaar noted that despite the stated inconsistency for Option 2, MPs can ignore periods further out that are not covered by STS but covered by PDS. Currently, USEP is already potentially inconsistent between STS and PDS during TPC activation.</p>	

	Mr Wise noted the point, but pointed out that under Option 2, the less experienced MPs may view that TPC is only activated for less than 48 periods.	
5.7	<p>Mr Guichelaar sought clarification on the scope of the initial rule change proposal received from industry.</p> <p>Mr Wise responded that the initial rule change proposal covered historical TPC-related information, with forecast TPC-related information subsequently considered by EMC for completeness.</p>	
5.8	<p>Mr Wise present an estimate of the costs to implement extending the publication of historical and real-time TPC-related information to include other uncapped product prices, and the costs for both Option 1 and Option 2 on the publication of forecasted TPC-related information.</p> <p>Mr Teo Chin Hau queried if Options 1 and 2 generate the same forecasted MAP. Mr Wise affirmed his understanding. Mr Teo then shared PacificLight Power's view that Option 2 provides more information; Gencos most likely are generating information under Option 1. Mr Teo shared that this is why PacificLight sees more value in Option 2.</p> <p>Mr Guichelaar asked if the cost estimates are based on formal requests for quotations. Mr Wise responded that these cost estimates were gathered from EMC's vendors. Mr Guichelaar queried if the cost figures would change if the scope or implementation details change. Mr Wise affirmed his understanding.</p> <p>Mr Fong Yeng Keong expressed costs concern from the consumers' perspective and questioned whether all market stakeholders will benefit equally from these enhancements to TPC-related information. Mr Teo responded that generator-class MPs who trade in real-time will benefit more from these enhancements. Mr Wong asked Mr Teo if the cost savings to generator-class MPs can be quantified. Mr Teo responded that he does not have a precise figure on the savings at the moment.</p> <p>Mr Andrew Tan sought clarification on costs if EMC implements Option 1, then subsequently implements Option 2. Mr Wise responded that the effort estimate does not cover this scenario.</p> <p>Mr Toh further clarified that there will be additional cost compared to implementing Option 2 straightaway due to repeated processes such as technology security related tests.</p>	
5.9	Mr Wise shared that based on a jurisdictional scan of other markets with mechanisms like TPC (ERCOT, WESM, AEMO), AEMO's Cumulative Price Threshold (CPT) is the most similar, further noting that something similar to Option 1 is adopted by Australia's National Electricity Market (NEM).	

	<p>Mr Guichelaar commented that CPT breaches will lead to forecast CPT-related information being published.</p> <p>Mr Teo further noted that forecast energy prices in the NEM are capped if CPT is breached.</p>	
5.10	<p>Mr Wise shared that EMC received comments 3 parties, namely Keppel Merlimau Cogen, PacificLight Power, and EMC Markets and Operations.</p> <p>Keppel and PacificLight prefer Option 2. On the inconsistencies associated with Option 2, Keppel mentioned that market participants are familiar with the different frequencies of the forecast runs, and it would not pose an issue to their analysis. PacificLight Power shared that increasing the frequency of the PDS can resolve the inconsistencies. Mr Wise mentioned that any review on the PDS should be done separately given its broader implications on market operations.</p> <p>EMC Markets and Operations provided comments that in addition to the relative merits of Options 1 and 2, knowing what TPC-related information market participants want is important. They mentioned that the inconsistencies associated with Option 2 may not be an issue for market participants familiar with the various forecast runs generated by EMC. However, they were concerned about the potential frequent change in forecasted TPC activation/de-activation that may result in excessive alerts and price capping/un-capping of forecasted product prices.</p>	
5.11	<p>Mr Wise had shared that EMC's initial recommendations to the RCP were to:</p> <ol style="list-style-type: none"> 1) Extend the publication of real-time and historical TPC-related information to include the Primary Reserve prices, Contingency Reserve prices, Regulation prices, and Market Network Nodal prices that are unaffected by the TPC; and 2) On the publication of forecasted TPC-related information, to introduce the publication of forecasted MAP and the MAPT to enable the market to infer when potential TPC activations and de-activations will occur. <p>The RCP unanimously supported EMC's recommendation to extend the publication of real-time and historical TPC-related information to include the other product prices that are unaffected by the TPC.</p> <p>On EMC's second recommendation related to forecasted TPC-related information, the Panel instead voted on whether to publish forecasted TPC-related information in the first place.</p> <p>The following Panel members voted for publication of forecasted TPC-related information:</p> <ol style="list-style-type: none"> 1. Mr. Teo Chin Hau (Representative of Generation Licensees) 	

	<ol style="list-style-type: none"> 2. Mr. Andrew Tan (Representative of Retail Licensees) 3. Mr. Matthijs Guichelaar (Representative of Retail Licensees) 4. Mr. Wong Yew Chung (Person experienced in financial matters in Singapore) <p>The following Panel members voted for not publishing forecasted TPC-related information:</p> <ol style="list-style-type: none"> 1. Mr. Soh Yap Choon (Representative of PSO) 2. Mr. Sherman Toh (Representative of Transmission Licensee) 3. Mr. Dallan Kay (Representative of Retail Licensees) 4. Mr. Cheong Zhen Siong (Representative of Wholesale Electricity Traders) 5. Mr. YK Fong (Representative of Consumers of Electricity in Singapore) <p>The following Panel member abstained from voting on whether to publish forecasted TPC-related information:</p> <ol style="list-style-type: none"> 1. Mr. Henry Gan (Representative of EMC) <p>Therefore, by majority vote, the Panel did not support publishing forecasted TPC-related information.</p> <p>With this decision, there was no need to vote on the 2 options for publishing forecasted TPC-related information.</p>	
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There being no other matters, the meeting ended at 11.55 a.m.

Toh Seong Wah
Chairman

Minutes taken by:
Ivy Leong
Legal, Compliance & Corporate Secretarial Executive