

RCP PAPER NO. : **EMC/RCP/150/2026/CP102**

SUBJECT : **GATE CLOSURE EXEMPTIONS FOR THE CANCELLATION OR DELAYING OF, AND BRINGING FORWARD OF SYNCHRONISATION**

FOR : **DECISION**

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DATE OF MEETING : **15 JANUARY 2025**

Executive Summary

Gate closure requirements and the associated exemptions in the Singapore Wholesale Electricity Market are set out in Chapter 6 Section 10.4 of the Market Rules. This paper assesses gate closure exemptions to account for the following scenarios:

- To allow for the cancellation/delay of synchronisation arising from unanticipated faults or issues; and
- To bring forward synchronisation, should the aforementioned unanticipated technical fault be resolved earlier than expected.

EMC assesses that cancellation/delaying of synchronisation has significant system security implications and merits gate closure exemption, as is currently the case for forced outages and failure to synchronise. Nevertheless, it has to be provided that the facility operator can demonstrate, to the satisfaction of the Market Surveillance and Compliance Panel (MSCP), that the violating offer variations were made promptly and in response to unforeseen events reasonably likely to affect system security.

However, EMC finds no sound argument to extend the exemption to the bringing forward of synchronisation.

EMC therefore recommends that the RCP support the proposal to establish a gate closure exemption for cancelled/delayed synchronisation.

At the 150th RCP meeting held on 15 January 2026, the RCP **by majority vote supported** EMC's recommendation as above.

1. Introduction

This paper discusses the proposal to review existing gate closure exemptions to account for the following scenarios:

- To allow for the cancellation/delay of synchronisation arising from unanticipated faults or issues; and
- To bring forward synchronisation, should the unanticipated technical fault be resolved earlier than expected.

2. Background

2.1 Gate Closure and Exemptions

Chapter 6 Section 10.4.1 and 10.4.2 of the Market Rules stipulate that no offer or bid variation shall be submitted by market participants (MP) within 65 minutes immediately prior to the dispatch period to which the offer/bid variation applies (“gate closure”), except for certain conditions where exemptions apply. While gate closure provides dispatch certainty and facilitates unit commitment in the Singapore Wholesale Electricity Market (SWEM), gate closure exemptions exist for the primary reason of system security – for a specific facility to better reflect its physical capability, or for all facilities to respond positively to a system stress.

The list of such gate closure exemptions has been reviewed and expanded several times¹ since the start of the market. In assessing new gate closure exemptions, system security considerations always take priority. The current list of gate closure exemptions is:

for offer changes,

- a) To reflect a generation registered facility’s (GRF) expected ramp profiles during periods following synchronisation or preceding de-synchronisation;
- b) To reflect a GRF’s revised capability for the three consecutive dispatch periods immediately following a forced outage or its failure to synchronise;
- c) To reflect an import registered facility’s (IRF) revised capability for the three consecutive dispatch periods immediately following a forced outage, including a forced outage or failure to synchronise of any part of the IRF;
- d) To decrease energy supply in an energy surplus situation, for which a market advisory notice has been issued;
- e) To increase energy, reserve or regulation supply if it improves a shortfall situation, for which a market advisory notice has been issued;
- f) To increase energy, reserve or regulation supply if it improves a shortfall situation, for which a high-risk operating state (HROS) or an emergency operating state (EOS) system status advisory notice is in effect; and
- g) To reflect a load registered facility’s (LRF) revised reserve capability during a forced outage or following a decrease in energy withdrawal from reserve activation,

for bid changes,

- h) To reflect a LRF’s revised capability during a forced outage or following a decrease in energy withdrawal from reserve activation;

¹ Refer to RC314: Exceptions to Gate Closure During an Emergency Operating State <https://www.emcsg.com/f1027,77844/EMC314-EMA-LL.pdf>, Rules Modification for EMA’s “Implementing Demand Response in the National Electricity Market of Singapore” https://www.emcsg.com/f127,112211/335-ImplementingDR_Publication_-_Market_Rules.pdf, RC357: Gate Closure Exemptions <https://www.emcsg.com/f1841,136648/EMC357-JO-EMA.pdf>, and Rules Modification for EMA’s “Gate Closure Exemption for Electricity Imports” https://www.emcsg.com/f127,164023/Rules_Modification.pdf

- i) To increase quantities in energy bids if it improves an energy shortfall situation, for which a market advisory notice has been issued; and
- j) To increase quantities in energy bids if it improves an energy shortfall situation, for which a HROS or an EOS system status advisory notice is in effect,

and subject to the price so offered or bidden, other than for additional quantities, being the same as that previously offered or bidden for that period.

All offer and bid changes made after gate closure will be reported by the EMC to the Market Assessment Unit (MAU). MPs that are dispatch coordinators of the relevant facilities are then required to submit a report explaining their reasons for the offer and bid changes made after gate closure. Based on the report and additional information (if any), the MAU will provide its analyses and recommendations for all gate closure violations to the Market Surveillance and Compliance Panel (MSCP) for the MSCP's determination.

2.2 Cancellation of Synchronisation vs Failure to Synchronise

The concept paper *CP90: Clarification of Failure to Synchronise in Gate Closure Exemptions* (CP90) established the difference between the cancellation/delaying of synchronisation and failure to synchronise. "Failure to synchronise" was already recognised as a gate closure exemption then – an illustration of this case is provided in Annex 1.

Synchronisation, as defined in Chapter 8 of the Market Rules, is connecting a generation facility or its units to the transmission system after aligning frequencies, voltages, and voltage angles. A failure to synchronise occurs when the GRF has submitted offers to reflect its intent to connect/synchronise to the grid but the process was not completed. In such cases, the PSO issues a non-compliance notice for the facility, typically verified by the MSCP during gate closure violation assessments.

A cancellation/delaying of synchronisation, on the other hand, is a voluntary action by the operator of the facility to cancel/delay the facility's synchronization. Here, offers were also withdrawn or modified in response to unanticipated technical faults or alarms that signal the potential occurrence of such faults. EMC understands that the PSO may not issue a non-compliance letter in this case. It is therefore clarified that the existing gate closure exemption for "failure to synchronise" does not cover "cancellation/delaying of synchronisation".

2.3 Jurisdiction Scan

EMC surveyed gate closure practices in other jurisdictions.

Most jurisdictions except the Australian National Electricity Market (NEM) and the New Zealand Electricity Market (NZEM) have a day-ahead market which leaves fewer offers and bids to be submitted in the real-time balancing market. Hence the considerations on gate closure arrangements in these markets may not be as relevant to the SWEM.

In the NEM, which now operates on 5-minute dispatch intervals, generators submit their bid prices and volumes the day before. Afterwards, their bid prices are locked, but they can adjust the MW volumes for each bid price band up to the start of the relevant trading interval.

In the NZEM, gate closure is currently 1 hour. Among other exemptions, the NZEM currently allows generators to change their offers within gate closure when (a) the revision is necessary due to a bona fide physical reason, and (b) this bona fide reason ceases to exist within 24 hours and the upward revision of the offer quantity cannot be more than the original downward revision.

While practices in other jurisdictions can provide some insights, it would be prudent not to over-rely on them as a reference for the SWEM as gate closure considerations may arise from market-specific considerations (generation technology mix, dispatch interval, etc).

3. Proposal Analysis

The rule change proposal sought to include two new gate closure exemption rules under Chapter 6, Section 10.4.1.1 of the Market Rules to include the following:

- (1) To account for cancellations/delays of synchronisation arising from unanticipated technical faults/issues; and
- (2) To account for the bringing forward the synchronisation as the technical fault/issue is resolved earlier than expected.

We will evaluate (1) and (2) in order.

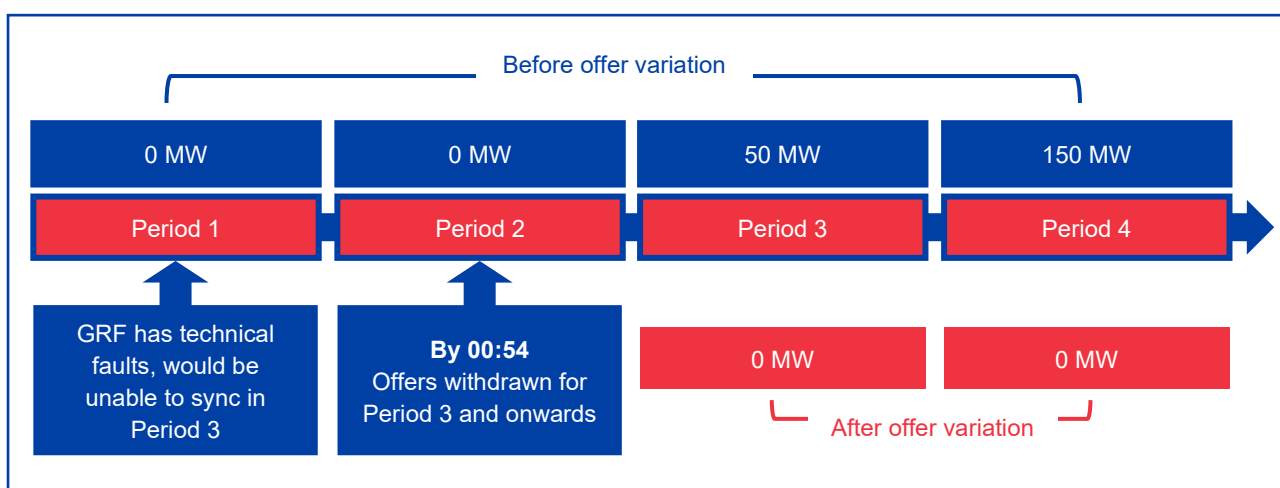
3.1 Desired Behaviour from a Facility potentially Unable to Synchronise and when it is ready for Subsequent Re-Synchronisation

Self-commitment is an important design principle of the SWEM. MPs are responsible for committing their facilities ahead of time, and submitting and revising offers promptly to reflect their facilities' capabilities as MP themselves have the most current information of their facilities.

RC357: *Gate Closure Exemptions* (RC357) had previously established that the desired behaviour of a facility during a forced outage is to withdraw its offers for many periods after the forced outage, followed by the submission of its reoffer before gate closure for the period in which it is certain of a recovery from the forced outage and ready to resynchronise and generate.

The same principle can be applied for a facility experiencing unanticipated technical faults that would lead to its inability to synchronise. The desired behaviour of the facility is to **promptly withdraw its offers for the period of synchronisation and many periods after to reflect its inability to synchronise, followed by the submission of its reoffer before gate closure for the period in which it is certain to be able to resynchronise**. The desirable behaviour is illustrated in Figure 1 below.

Figure 1: Desired Behaviour for Unanticipated Technical Faults



3.2 Current Treatment of Cancelled/Delayed Synchronisation vis-à-vis Gate Closure Exemptions

In CP90, it was clarified that in the example in Figure 1, the facility shall not be considered to have experienced a “failure to synchronise”, in either Period 3 (the period in which the facility planned to synchronise) or Period 1 (the period in which the technical faults were triggered).

A facility may instead be exempted from gate closure if it proves to the MSCP that a “forced outage” occurred in Period 1, allowing offer changes beyond gate closure for Periods 2–4.

Typically, the MSCP checks if the PSO has issued a non-compliance notice or if the facility can satisfactorily demonstrate a forced outage. If synchronisation is cancelled voluntarily, the PSO is unlikely to issue non-compliance letters due to limited insight into the plant’s issues.

Therefore, it is apparent that there is no obvious gate closure exemption that can be consistently applied for cancelled/delayed synchronisation events.

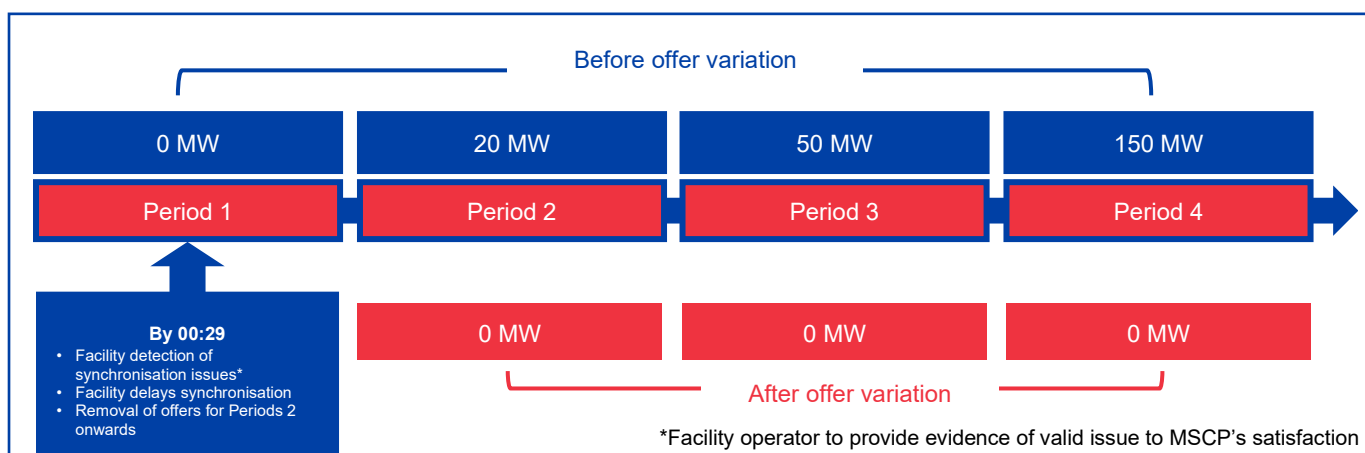
3.3 Evaluating the Case for Gate Closure Exemptions for Cancelled/Delayed Synchronisation

Gate closure exemptions are intended to benefit system security. This includes allowing a facility to revise offers within gate closure to better reflect its physical capabilities. Synchronisation is an important first step for a facility to be able to subsequently generate in accordance with its schedule in subsequent periods. The detection of issues potentially affecting synchronisation merits further follow-up by the facility operator, and synchronisation ought to be delayed to a later time after those issues are resolved. This cancellation/delaying of synchronisation ought to be reflected in market clearing by the removal of the facility’s offers, within gate closure if required. This prevents a false sense of system security as it allows other units to be scheduled in this facility’s stead.

We then assess if this merits a distinct gate closure exemption in the rules; as one possible approach is to establish that cancelled/delayed synchronisation now falls under the current exempted cases for “failure to synchronise” or “forced outage”, and have facility operators prove to the MSCP’s satisfaction that their gate closure violations fall within the revised scope of these existing exemptions. EMC’s assessment is that it is preferable to establish a distinct gate closure exemption for cancelled/delayed synchronisation. As established in section 2.2 of this paper, there remain differences in a bona fide failure to synchronise and a voluntary cancellation/delaying of synchronisation. The supporting documentation (for e.g., the issuance of a PSO non-compliance letter) may also differ. Making it explicit that cancelled/delayed synchronisation is also possible grounds for gate closure exemption promotes clarity and provides confidence for facility operators acting in real-time.

However, we stress that gate closure exemptions are strictly for the prompt submission of offer variations due to unforeseen physical reasons that can affect synchronisation, and not motivated by other factors such as financial gain. In the potential absence of supporting documentation from the PSO, it becomes more important for facility operators to provide detailed evidence, to the MSCP’s satisfaction, that offer variations within gate closure were timely and based on valid synchronisation concerns. This can include detailed logs or data on technical fault alarms.

Figure 2: Desired Behaviour for Cancellation/Delaying of Synchronisation



In this spirit, EMC recommends establishing a new gate closure exemption for cancelled/delayed synchronisation. Similar to that for forced outage and failure to synchronise, EMC proposes to exempt offer variations for 3 successive periods following the detection of an

unforeseen technical issue that is reasonably likely to result in the facility failing to synchronise if left unaddressed, as illustrated in Figure 2. The facility operator should cancel/delay the synchronisation of the facility to after the issue has been addressed.

3.4 Current Treatment of Bringing Forward Synchronisation vis-à-vis Gate Closure Exemptions

There are no existing gate closure exemptions to allow for offer variations within gate closure to reflect the bringing forward of a facility’s synchronisation.

As established in section 3.1 of this paper and in RC357, the desired behaviour is for facility operators to reoffer before gate closure to reflect the facility’s re-synchronisation back to the grid.

3.5 Evaluating the Case for Gate Closure Exemptions for Bringing Forward Synchronisation

Unlike the case for cancelled/delayed synchronisation, EMC does not find significant system security concerns associated with re-synchronisation that merits the facility operator to revise its offers within gate closure.

In certain scenarios where the system is under significant stress, there are existing gate closure exemptions that would allow all facilities to change their offers within gate closure to alleviate the system stress situation. This includes the facility attempting to re-synchronise earlier. When the system is otherwise not under significant stress, EMC does not find it convincing to allow only this specific facility to revise their offers within gate closure to re-synchronise earlier. Instead, other facilities that have submitted their offers before gate closure should be scheduled.

Therefore, **EMC does not recommend establishing a new gate closure exemption for the bringing forward of synchronisation back to the grid.**

4. Consultation

The concept paper was published for industry consultation on 2 December 2025. Comments were received from Keppel Merlimau Cogen, Sembcorp Cogen, and the PSO. Their comments and EMC’s responses are provided in Table 1 below.

Table 1: Industry Comments and EMC’s Responses

S/N	Comment Received	EMC Response
<i>Comments from Keppel Merlimau Cogen</i>		
1	Keppel supports the proposed rule change to allow for the cancellation or delay of synchronization arising from unanticipated technical faults or issues.	EMC notes and appreciates Keppel’s comments.
<i>Comments from Sembcorp Cogen</i>		
2	Sembcorp Cogen supports EMC’s proposal to provide gate closure exemptions for cases involving the cancellation or delay of synchronization. We believe this proposal has merit as it facilitates generator companies’ recommissioning and start-up activities following an outage.	EMC notes and appreciates Sembcorp’s comments.

S/N	Comment Received	EMC Response
	<p>Cogen agrees that the proposed gate closure exemptions should apply strictly to unforeseen circumstances that could affect synchronization. This proposal addresses a gap in the current framework, where failure to synchronize only considers connecting a generation facility to the transmission system, without accounting for unforeseen issues at the CCGT level.</p> <p>Implementing this change will help eliminate a false sense of system security and allow more reliable units to be scheduled instead.</p>	
<i>Comments from the PSO</i>		
3	<p>During the 131st RCP Meeting held on 8 September 2022 discussing on the CP90: Clarification of Failure to Synchronise for Gate Closure Exemptions, EMC assessed that there was no compelling reason for the proposed change in the definition for “failure to synchronise”. Any extenuating circumstances an MP experiences can be referred to the MSCP for its independent consideration. Therefore, EMC recommended no rule change was required, and the RCP unanimously supported this recommendation.</p>	<p>EMC would like to clarify that CP90 considered a failure to synchronise as distinct from cancelled synchronisation and was therefore beyond the scope of CP90’s assessment. EMC is making this assessment in CP102.</p>
4	<p>PSO maintains that Gencos have ample time and responsibility to ensure that their units are fully prepared for synchronisation before they offer for dispatch. From PSO’s perspective, a failure to synchronise is materially different from a cancellation to synchronise. A cancellation occurs before the unit is scheduled for real time dispatch and therefore cannot be independently verified, whereas a failure to synchronise occurs after the unit has been offered into real time dispatch and is subject to compliance obligations. Allowing gate closure exemption for cancellation to synchronise may also create more uncertainty in dispatch resulting in greater system security risk, as the system operator cannot validate whether the unit would have been able to synchronise.</p>	<p>EMC understands that system conditions are dynamic. EMC believes that if a facility faces bona fide unforeseen issues that affect synchronisation, there is merit to allow the facility operator to remove their offers, within gate closure if required, so that MCE can schedule another unit in place of the affected unit.</p> <p>EMC would also clarify that an exemption will only be granted if the MSCP is satisfied with the reasons and evidence provided by the facility operator for each instance of cancellation of synchronisation.</p> <p>Further, EMC is proposing to not have any gate closure exemptions for offer variations to bring forward synchronisation within gate closure.</p>

5. Conclusion and Recommendation

This paper assesses the proposal to provide gate closure exemptions to account for the cancellation/delaying of synchronisation, and the bringing forward of synchronisation. EMC's assessment is that the cancellation/delaying of synchronisation has significant system security implications and merits similar gate closure exemptions to those currently provided for forced outages and failure to synchronise – provided that the facility operator can demonstrate, to the MSCP's satisfaction, that the offer variations within gate closure were made promptly and in response to valid synchronisation concerns. However, EMC does not find a significant argument to extend this for the bringing forward of synchronisation.

EMC therefore recommends that the RCP **support** the proposal to establish a gate closure exemption for cancelled/delayed synchronisation, and task EMC to draft the relevant rule modifications.

6. Decision at the 150th RCP Meeting

The concept paper was discussed at the 150th RCP meeting. The panel **by majority vote supported** the proposal to establish a gate closure exemption for cancelled/delayed synchronisation, and task EMC to draft the relevant rule modifications.

The following Panel members supported EMC's recommendation:

1. Mr. Calvin Quek (Representative of Generation Licensee)
2. Mr. Tan Jian Hui (Representative of Generation Licensee)
3. Mr. Cheong Zhen Siong (Representative of Wholesale Electricity Trader)
4. Mr. Andrew Tan (Representative of Retail Electricity Licensee)
5. Dr. Toh Mun Heng (Representative of Consumers of Electricity in Singapore)
6. Mr. Fong Yeng Keong (Representative of Consumers of Electricity in Singapore)
7. Ms. Teo Swee Teng (Representative of Market Support Services Licensee)
8. Mr. Sherman Toh (Representative of Transmission Licensee)
9. Mr. Wong Yew Chung (Person experienced in Financial Matters in Singapore)

The following Panel members did not support:

1. Mr. Soh Yap Choon (Representative of the PSO)
2. Mr. Dallon Kay (Representative of Retail Electricity Licensee)

Annex 1: Example of Gate Closure Exemption Arising from GRF’s Failure to Synchronise

- GRF has obtained the necessary approval from PSO for its synchronization in Period 1
- GRF has submitted non-zero energy offers for Period 1 and after, reflecting its start-up profile
- GRF failed to synchronise in Period 1 at 00:10
- GRF submitted offer variations to remove its energy offers for Period 3 and onwards in Period 2 at 00:54
- PSO issued a non-compliance notice to the GRF for its failure to synchronise in Period 1
- **GRF in Period 1 is deemed to have “failed to synchronise”** for the purposes of applying gate closure exemptions, it is allowed to change its offers for Period 2, 3 and 4 after gate closure
- GRF’s offer variations for Period 3 and 4 (made in Period 2) after gate closure are therefore exempted; its offer variations for Period 5 and after (made in Period 2) are before gate closure

Figure 3: Gate Closure Exemption for Failure to Synchronise

