

Notice of Market Rules Modification

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Rule Reference:	Market Rules/Chapter 6, Sec 5.1.5, 5.1.6, 5.1.7 & 10.4.1
Proposer:	Energy Market Authority
Date received by EMC:	23 September 2009
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Status:	Approved By EMA
Effective Date:	13 October 2010

Summary of Proposed Rule Modification:

This paper analyses KEMA Consulting's proposed changes to the Market Rules, arising from a review of existing generational reliability practices in the Singapore Wholesale Electricity Market (SWEM). KEMA's proposed changes include:

1. Requiring a Generation Registered Facility (GRF) to re-declare its capacity no later than 30 minutes after a trip or a failure to synchronise
2. Introducing a penalty mechanism based on a pre-determined formula should a GRF fail to adhere to (1) above

Based on a legal review of KEMA's proposal and the market design principles behind the existing rules, we conclude that the current rules already impose stringent obligation on GRFs to revise its offers if its future availability is less than its existing offers. Also, the proposed penalty mechanism is not congruent with the SWEM's design principle of self-commitment. Imposing financial penalties on GRFs that fail to comply with their dispatch instructions without acceptable reasons would already incentivise them to revise their offers to comply with their dispatch instructions. Thus, KEMA's proposals are not supported.

Notwithstanding, rule changes are proposed to clarify that even if a dispatch coordinator expects the GRF's output to be less than its offered quantity by more than 10MW or 5 percent, he **should not** revise its offers if it is within gate closure, unless it falls under the exceptions provided for under the existing Chapter 6, Section 10.4.1 of the Market Rules (e.g. forced outage).

Date considered by Rules Change Panel:	03 September 2010
Date considered by EMC Board:	16 September 2010
Date considered by Energy Market Authority:	06 October 2010

Proposed rule modification:

See attached paper.

Reasons for rejection/referral back to Rules Change Panel (if applicable):

PAPER NO : **EMC/BD/05/2010/04(b)**

RCP PAPER NO. : **EMC/RC/51/2010/298**

SUBJECT : **REVIEW OF ECONOMIC INCENTIVES FOR GENERATOR RELIABILITY**

FOR : **DECISION**

PREPARED BY : **NERINE TEO
ECONOMIST, MARKET ADMINISTRATION**

REVIEWED BY : **PAUL POH
SVP, MARKET ADMINISTRATION**

DATE OF MEETING : **16 September 2010**

Executive Summary

This paper analyses KEMA Consulting's proposed changes to the Market Rules, arising from a review of existing generational reliability practices in the Singapore Wholesale Electricity Market (SWEM). KEMA's proposed changes include:

1. Requiring a Generation Registered Facility (GRF) to re-declare its capacity no later than 30 minutes after a trip or a failure to synchronise
2. Introducing a penalty mechanism based on a pre-determined formula should a GRF fail to adhere to (1) above

Based on a legal review of KEMA's proposal and the market design principles behind the existing rules, we conclude that the current rules already impose stringent obligation on GRFs to revise its offers if its future availability is less than its existing offers. Also, the proposed penalty mechanism is not congruent with the SWEM's design principle of self-commitment. Imposing financial penalties on GRFs that fail to comply with their dispatch instructions without acceptable reasons would already incentivise them to revise their offers to comply with their dispatch instructions.

Notwithstanding, this review proposes to make rule changes to clarify how the current re-declaration rules work in relation to the gate closure rules. Specifically, rule changes are proposed to clarify that even if a dispatch coordinator expects the GRF's output to be less than its quantity currently offered by more than 10MW or 5 percent, he **should not** revise its offers if it is within gate closure, unless it falls under the exceptions provided for under the existing Chapter 6, Section 10.4.1 of the Market Rules (e.g. forced outage).

The Rules Change Panel (RCP), by majority vote, recommends that the EMC Board **adopt** the proposed rule modifications set out in Annex 2.

1. INTRODUCTION

In 2008, the Energy Market Authority (EMA) engaged KEMA Consulting to review existing generation reliability practices in the Singapore Wholesale Electricity Market (SWEM). In its final report “Review of Economic Incentives for Generator Reliability” dated 12 May 2009, hereinafter referred to as “KEMA Report (2009)”, having considered the industry’s feedback to its draft report, KEMA concluded¹ that the current Market Rules do not impose sufficiently stringent requirements in ensuring that a Generation Registration Facility (GRF) will immediately re-bid² following a trip. As a result, these late re-declarations³ may lead to the artificial suppression of spot prices and system security concerns when the physical unavailability of these GRFs is not reflected in the Market Clearing Engine (MCE).

Consequently, KEMA proposes to strengthen the Market Rules by requiring GRFs to submit re-declarations of offers within 30 minutes following a trip or failure to synchronise, as well as introduce an automatic penalty scheme to incentivise these GRFs to re-declare their availability. EMA requested for this proposal to be put through the Rules Change process, following which it was prioritised into the Financial Year 2010/2011 Rule Change Work Plan. Section 2 summarises KEMA’s findings and proposed changes, while section 3 presents an analysis of KEMA’s proposal.

2. BACKGROUND

After observing high levels of forced outage rates among GRFs in early 2008, EMA engaged KEMA to review whether there is scope to incentivise generators to provide reliable energy supplies to the market.

The following sub-sections summarise KEMA’s scope of review, observations and recommendations arising from the review.

2.1 KEMA’s scope of review

KEMA reviewed ways to incentivise generators to provide reliable energy supplies, taking into account the following⁴:

- Whether present arrangements encourage the efficient provision of reliable energy supplies;
- Whether there are any constraints imposed by the market gate closure;
- Examine incentives on generators to provide reliable reserves;
- Identify issues arising from reliability, its impact on retail consumers and the operations of the Vesting Contract regime

2.2. KEMA’s findings

Based on historical evidence, KEMA notes that there are sufficient reliability incentives for GRFs that are operated daily, specifically Combined Cycle Gas Turbines (CCGTs) and some oil-fired units. KEMA notes that these incentives are currently provided for largely through vesting contracts and reserve procurement arrangements⁵.

However, KEMA concludes that GRFs **do not consistently submit revised offers immediately following a trip or failure to synchronise**. KEMA contends that such

¹ KEMA has made a number of recommendations. However, only those that the EMA has referred to be put through the rules change process will be discussed in this paper.

² This should be referred to as “Revise offers” under the Market Rules.

³ Under the Market Rules, this is referred to as “revised offers”. We have, however, retained the use of the term “re-declaration” as used in KEMA Report (2009).

⁴ Refer Section 1.2, page 4 of KEMA Report (2009)

⁵ Refer to Section 1.4.1, page 5 of KEMA Report (2009)

behaviour can be attributed to GRFs “wishing to keep market prices at normal levels to avoid excessive contract payments”⁶ or their flawed expectation to be “able to re-synchronise the unit quickly and resolve the problem”⁷. These late re-declarations, with some only made 90 minutes following these trips, result in:

- a. Suppressed spot market prices that do not reflect actual physical supply conditions

If generators do not immediately revise their offers following a trip or failure to synchronise, the MCE is not updated of changes in supply conditions and hence do not schedule eligible offers up the merit order. This leads to the artificial suppression of spot market prices, which do not reflect the tighter actual supply conditions.

- b. Increased system security risks

System security is compromised as other GRFs scheduled for reserve will have to ramp up to cover the energy shortfall from the GRFs that fail to re-declare their unavailability. This reduces the available reserve capacity during the period to deal with other potential contingency events.

- c. Other generators with available capacity are denied the opportunity to offer additional supplies into the market

When GRFs that trip or fail to synchronise do not revise their offers, any energy shortfall will not be reflected in the MCE. Thus, other GRFs with actual available capacity will be unaware of this shortfall and would not have the opportunity to bid in extra capacity.

2.3 KEMA’s recommendations

The findings summarised in section 2.2 above form the basis for KEMA’s recommendations. Specifically, KEMA proposes the following:

- a. Impose a new obligation that requires dispatch coordinators to re-declare their GRFs’ availability no later than 30 minutes following a trip or failure to synchronise

In KEMA’s view, this obligation reduces the lag in re-declaration of a GRFs’ availability, and in turn addresses the problems identified in section 2.2 above.

- b. Introduce a penalty mechanism

KEMA feels that there is a need to incentivise generation companies to re-declare following their GRFs’ outages or failures to synchronise, and strictly adhere to the obligation proposed above. Therefore, KEMA proposes the introduction of a penalty that is tagged to the GRF’s scheduled energy amount, for the dispatch period in which it fails to re-declare.

Details of KEMA’s recommendations are analysed in the next section.

3. ANALYSIS

This section presents EMC’s analysis of KEMA’s conclusion and recommendations. The analysis takes into account the principles underpinning the SWEM, and the legal review of our external legal advisor, Rajah & Tann LLP⁸ (R&T LLP) on the existing rules and KEMA’s proposed rules (see Annex 1).

⁶ Refer to Section 4.4.2, page 50 of KEMA Report (2009)

⁷ Ibid

⁸ KEMA noted that their proposed rules changes have not been put through a legal review.

The analysis will be addressed in two parts:

- a. Analysis of KEMA's proposed 30-minute re-declaration obligation
- b. Analysis of KEMA's proposed penalty mechanism

3.1 ANALYSIS: KEMA's proposed 30-minute re-declaration obligation

This section analyses KEMA's proposal to require a GRF to re-declare following an outage or failure to synchronise within 30 minutes. We will first examine KEMA's proposed Market Rule changes to effect this obligation, then analyse them in the context of existing Market Rules.

3.1.1. KEMA's proposed changes to the Market Rules

KEMA attributes the lag in (or lack of) GRF re-declarations following a trip or failure to synchronise to lack of clarity in the existing Market Rules on gate closure, which is reflected below:

Chapter 6, Section 10.4.1

10.4.1 No *offer variation* or revised *standing offer* shall be submitted by or for a *market participant* within 65 minutes immediately prior to the *dispatch period* to which the *offer variation* or revised *standing offer* applies, except:

10.4.1.1 where it is intended:

- a. for a *generation registered facility*, to reflect its expected ramp-up and ramp-down profiles during periods following *synchronisation* or preceding *desynchronisation*; or
- b. for a *generation registered facility*, to reflect its revised capability during a *forced outage (sic)*; or
- c. to contribute positively to the resolution of an *energy* surplus situation by allowing for decreased supply of *energy*; or
- d. to contribute positively to the resolution of *energy, reserve* or *regulation* shortfall situations by allowing for increased supply of *energy, reserve* or *regulation*; and

10.4.1.2 where the price so offered, other than for additional quantities of *energy, reserve* or *regulation*, is the same as that previously offered for that *dispatch period*.

Specifically, KEMA is of view that these rules "allow", rather than "require" generators to re-declare their availability immediately following a forced outage, even when they are within gate closure⁹.

EMC agrees that this assessment from KEMA is accurate, insofar as the Market Rules requiring re-declaration is not contained within 10.4.1 but rather, in Sections 5.1.5 and 5.1.6. Section 10.4.1 was designed to make provisions to "allow" for re-declaration within gate closure, such that GRFs re-declaring under one of the four exceptions will not be considered to have violated gate closure rules.

KEMA also contends that Chapter 6, Section 5.1.5 of the Market Rules (reflected below) do not impose stringent obligations in enforcing re-declarations on the GRFs' part. KEMA argues that the phrase "reasonably expects" in this section provides a "degree of latitude to the generators" and does not consider it "appropriate in all circumstances".

Chapter 6, Section 5.1.5

⁹ Refer to Section 4.4.4, Page 51 and 42 of KEMA Report (2009)

5.1.5 For any *dispatch period* in the current *market outlook horizon*, if the quantity currently *offered* in a valid *offer* for a *registered facility* exceeds the relevant quantity that its *dispatch coordinator* reasonably expects to be available from the *registered facility* by more than:

5.1.5.1 10 MW;

5.1.5.2 5 percent of the quantity currently *offered*,

whichever is greater, then that *dispatch coordinator* shall immediately submit an *offer variation* for that *registered facility* to the EMC.

Concomitantly, KEMA proposes requiring a GRF to re-declare its capacity within 30 minutes of a trip or failure to synchronise, as shown below. KEMA believes that this change would tighten the re-declaration obligations and reduce time lags in the price signalling process¹⁰.

KEMA's Proposed Chapter 6, Section 5.1.8:

5.1.8 An *offer variation* or *revised standing offer* reflecting the revised capability of a *generation registered facility* shall be submitted by or for a *market participant* as soon as practicable and no later than 30 minutes after the occurrence of either:

a. a *forced outage* or;

b. a failed attempt at *synchronisation*.

Although KEMA contends that Chapter 6, Section 10.4.1 of the Market Rules is not stringent enough to require re-declaration, it feels that there are wider implications associated with these Market Rules on gate closure. As such, KEMA proposes to keep this section intact, but supplement it with a new Section 5.1.9 below¹¹:

KEMA's Proposed Chapter 6, Section 5.1.9

5.1.9 Where an *offer variation* or *revised standing offer* is submitted in accordance with 5.1.8 and is submitted within 65 minutes immediately prior to the *despatch period* to which the *offer variation* or *revised standing offer* applies, such *offer variation* or *revised standing offer* shall comply with the requirements of 10.4.1.

3.1.2 Analysis of KEMA's proposed rule changes vis-a-vis the existing Market Rules

This section examines the existing Market Rules (Chapter 6, Sections 5.1.5 and 10.4.1) identified by KEMA as being inadequate in the context of their underlying design principles, how they are meant to work with each other, and R&T LLP's legal assessment. The rules and purpose of each rule are summarised in the table below:

¹⁰ Refer to Appendix 1, Page 76 of KEMA Report (2009)

¹¹ Refer to Appendix 1, Page 76 of KEMA Report (2009)

Table 1: Purpose of Chapter 6, Sections 5.1.5 and 10.4.1

Relevant Section of Market Rules	Intent
Chapter 6, Section 5.1.5	<p><u>Description</u> This section requires a GRF to immediately submit an offer variation (re-declare its availability) should it expect its output to vary by more than 5% or 10MW from its scheduled amount.</p> <p><u>Purpose</u> To ensure that the MCE is updated with GRFs' future availability for the purposes of producing dispatch and pricing schedules.</p>
Chapter 6, Section 10.4.1	<p><u>Description</u> This section on gate closure disallows GRFs from submitting offers within 65 minutes immediately prior to the dispatch period, except under the following conditions:</p> <ul style="list-style-type: none"> • To reflect changes in ramp profile following synchronisation or preceding de-synchronisation • To reflect unavailability arising from a forced outage • To decrease supply in an energy surplus situation • To increase energy, reserve or regulation if it improves a shortfall situation <p><u>Purpose</u> To improve certainty to both the system operator (adequate generation resources to meet projected load) and gencos (certainty of real-time dispatch and time to prepare their units for dispatch).</p> <p>Other than under the four exceptions provided, a GRF should not revise offers within gate closure.</p>

Existing Market Rules on Re-Declaration

The purpose of Chapter 6, Section 5.1.5 of the Market Rules is to ensure that the MCE is kept updated on a GRF's availability. This more accurately aligns the supply conditions modelled in the MCE with actual supply conditions. R&T LLP is of the opinion that:

*"section 5.1.5 may be more stringent (not more lax) than section 5.1.8, since section 5.1.5 not only requires re-declaration upon actual occurrence of, but also prospective/future expectations of shortfall arising from, forced outages and synchronisation failures"*¹²

To elaborate, the words "immediately" and "reasonably expects" in the current rules create a more stringent obligation on the dispatch coordinator to re-declare its GRF's availability - not simply **immediately upon the occurrence** of the shortfall, but also possibly **before the occurrence**, if that is within reasonable expectation.

KEMA claims that the word "reasonably expects" in Section 5.1.5 imposes a "degree of latitude", as a dispatch coordinator could claim that he did not anticipate the shortfall. However, R&T LLP refutes that the dispatch coordinator, charged with operational control of the GRF, cannot absolve himself of such responsibilities or knowledge, as seen from their legal opinion below:

¹² Page 9, Section 3.3 (c) of R&T LLP's Legal Analyses, Annex 1

“...we envisage that it may be difficult for a dispatch coordinator to be able to say that he has no “reasonable expectation” of the event that has already occurred, since he is required to have operational control of the registered facility under Section 5.2.6.3 of Chapter 2 of the Market Rules and could be taken to have actual knowledge of the event”¹³

It can thus be concluded that from a legal perspective, the existing section 5.1.5 already imposes a stringent enough requirement on the dispatch coordinator, since he is obliged to have full knowledge of the GRF’s operations, and should immediately re-declare its availability when necessary.

KEMA’s Proposed Rules on Re-Declaration

KEMA proposes to require dispatch coordinators to submit offer variations or revise their standing offers within 30 minutes of the occurrence of an outage or failure to synchronise on that facility. This represents a relaxation of the current requirement of “immediate re-declaration”, as opined by R&T LLP:

“..the market participant or the dispatch coordinator is thus allowed up to 30 minutes **after** the occurrence of a forced outage or a failed attempt to synchronise. In contrast, (the existing) section 5.1.5 requires immediate re-declaration, not upon the occurrence of a shortfall, but upon the dispatch co-ordinator **having a reasonable expectation** of a shortfall. This interpretation translates to Section 5.1.5 requiring that an offer variation be made **“immediately upon the occurrence of a forced outage or failed attempt to synchronise”**¹⁴

The 30-minute window period allows dispatch coordinators to delay revising their existing offers/standing offers, which contradicts KEMA’s original intent to have price signals accurately reflect supply conditions in a timely manner. R&T LLP’s opinion is given below:

“The proposed section 5.1.8 thus allows the relevant market participant or dispatch co-ordinator greater latitude as to when to submit an offer variation than section 5.1.5 of Chapter 6. We would have thought that such latitude inherent in the proposed section 5.1.8 would result in the market prices taking longer to rise than would the existing section 5.1.5, which is the very criticism made against the existing Market rules in the extracted KEMA Observations in paragraphs 2.1(a) and 2.1.(h).”

A summary of the discussion between KEMA’s proposed rules vis-a-vis current market rules are given in Table 2 below:

Table 2: Summary of Discussion on Existing and KEMA’s Proposed Market Rules

Rules	Comments	Conclusion
Current Rules (10.4.1) No re-declaration allowed within gate closure, unless provided for under the four exceptions (e.g. forced outage).	KEMA: These rules “allow” for re-declaration rather than “require” it.	KEMA’s conclusion is correct However, the current rules requiring re-declaration are provided for in Sections 5.1.5 and 5.1.6, not 10.4.1.
Current Rules (5.1.5) Requires immediate re-declaration if dispatch coordinator reasonably expects offer quantity to	KEMA: The phrase “reasonably expects” provides a “degree of latitude to the generators” and does not consider it “appropriate in all circumstances”.	R&T LLP refutes that the dispatch coordinator, charged with operational control of the GRF, cannot absolve himself of such responsibilities or knowledge.

¹³ Page 8, Section 3.3 (b)(i) of R&T LLP’s Legal Analyses, Annex 1

¹⁴ Page 8, Section 3.3 (b)(i) of R&T LLP’s Legal Analyses, Annex 1

Rules	Comments	Conclusion
exceed actual output by more than 10MW or 5 percent of offer quantity.		
KEMA's Proposal (5.1.8) Requires re-declaration within 30 minutes upon occurrence of either forced outage or failed attempt at synchronisation.	R&T LLP: This is a relaxation of the current requirements (immediately upon reasonable expectation) by allowing GRFs up to 30 minutes after the occurrence of a forced outage or a failed attempt to synchronise to re-declare.	Not Supported – This gives the dispatch coordinator <u>greater latitude</u> as to when to submit an offer variation. This contradicts the original intent for timely price signals reflective of actual system conditions.
KEMA's Proposal (5.1.9) Re-declaration in respect of 5.1.8 submitted within gate closure shall comply with the requirements of 10.4.1.	Irrelevant, since Section 5.1.8 is not supported.	

Following from the above discussion, the existing Market Rules are sufficiently stringent in enforcing re-declaration obligations and thus, EMC does not recommend implementing KEMA's proposed Section 5.1.8. Consequently, Section 5.1.9 is also unnecessary.

3.1.3 Refinement of Existing Market Rules

The only value in KEMA's proposals is to highlight the possible confusion that exists on how the existing Section 10.4.1 on gate closure relates to the existing Sections 5.1.5 to 5.1.7 on re-declaration obligations. Specifically, Sections 5.1.5 to 5.1.7 require a dispatch coordinator to re-declare its availability immediately upon a reasonable expectation of shortfall in energy output from its dispatch. However, if this expectation is formed within gate closure, but yet not provided for under one of the four exceptions in 10.4.1, it is unclear what the dispatch coordinator should do under the existing Market Rules:

- a) Either re-declare, hence violating gate closure rules in Section 10.4.1; or
- b) Do not re-declare, hence violating re-declaration rules in Sections 5.1.5-5.1.7

In principle, specific rules (10.4.1 on re-declaration within gate closure) should always take precedence over general rules (5.1.5-5.1.7 on re-declarations in general), although EMC would like to take this opportunity to clarify the market design principles behind this issue.

As discussed earlier, the gate closure rule under Chapter 6, Section 10.4.1 of the Market Rules improves certainty to both the generators and the PSO. With an appropriate gate closure timeframe, generators are given reasonable certainty of whether they will be dispatched in real-time, through notification in their short-term dispatch schedules, which provides lead-time to start-up/synchronise their plants. Similarly, the PSO is provided with improved certainty that there are adequate generation resources to meet system demand. If generators were allowed to revise offers freely within the gate closure, then some generators not scheduled in the short-term schedule may find themselves scheduled in real-time (i.e. no lead time to run up their plants). Such generators may thus find themselves unable to be dispatched at such short notice, which could compromise system security.

Notwithstanding, there are benefits in allowing re-declaration during gate closure. For example, in the case of a trip, re-declaration updates the MCE of the actual supply conditions so that it can dispatch only generators capable of producing energy, and reflect prices accurately. These were exactly KEMA's original goal, which is for price signals to accurately reflect scarcity conditions. To this end, section 10.4.1 already achieves this by providing for situations under which gencos are allowed to re-declare within gate closure (e.g. forced outage).

Following from these arguments, the gate closure rules under Chapter 6, Section 10.4.1 of the Market Rules should supersede the re-declaration obligations under Chapter 6, Sections 5.1.5 to 5.1.7 of the Market Rules. Table 3 below summarises the required refinements to make this clarification. Details of the proposed rule changes are attached in Annex 2.

Table 3: Proposed Rule Changes

Relevant Sections	Proposed Changes	Reasons for Change
Chapter 6, Section 5.1.5	To include the words "Subject to Section 10.4.1".	To make clear that the re-declaration requirement in section 5.1.5 is still subject to the gate closure rules in section 10.4.1.
	To include the words "for that dispatch period".	To make clear that the offer variation required to be submitted must be for the dispatch period with the expected energy shortfall.
Chapter 6, Section 5.1.6	To include the words "Subject to Section 10.4.1"	To make clear that sections 5.1.6 and 5.1.7 is subject to the gate closure rules in section 10.4.1.
Chapter 6, Section 5.1.7		
Chapter 6, Section 10.4.1	To include the words "Notwithstanding sections 5.1.5, 5.1.6 and 5.1.7"	To make clear that the gate closure rules in section 10.4.1 applies, notwithstanding the requirements in sections 5.1.5, 5.1.6 and 5.1.7 for the dispatch coordinator to re-declare. Hence, a dispatch coordinator should not re-declare if it is within gate closure, even if required under sections 5.1.5, 5.1.6 and 5.1.7, unless it falls under the exceptions provided for in section 10.4.1.
Chapter 6, Section 10.4.1.1 (b)	To replace the word "outrage" with "outage"	To correct a typographical error.
Chapter 6, Section 10.4.1.1(c) and (d)	To introduce the words "pertaining to which the EMC has issued an <i>advisory notice</i> under section 9.3.1"	To make clear that the exceptions in 10.4.1.1(c) and 10.4.1.1(d) only apply respectively to offer variations or revised standing offers which are intended to contribute positively to the resolution of energy surplus or energy,

Relevant Sections	Proposed Changes	Reasons for Change
		reserve or regulation shortfall situations where the EMC has issued advisory notices under section 9.3.1 of Chapter 6.

EMC recommends the adoption of the proposed refinements set out in Annex 2 to the Market Rules.

3.2 ANALYSIS: KEMA's proposed penalty mechanism

This section discusses the second part of KEMA's proposal i.e. their proposed penalty mechanism for failure to re-declare.

3.2.1 KEMA's proposed penalty mechanism

KEMA refers to the existing Chapter 6, Section 10.4.2 of the Market Rules, as extracted below:

Chapter 6, Section 10.4.2

10.4.2 The *EMC* shall report to the *market surveillance and compliance panel* for investigation, *offer variations* or revised *standing offers* submitted during the 65-minute period referred to in section 10.4.1, and provide any factors of which the *EMC* is aware that could reasonably justify the *offer variations* or revised *standing offer*.

KEMA argues that this section refers re-declaration cases within gate closure to the MSCP, but does not require the same when the reverse happens – GRF failing to re-declare within gate closure (where required under Chapter 6 Section 5.1.5 or KEMA's proposed 5.1.8, and in compliance with Chapter 6 Section 10.4.1). They thus propose the addition of section 5.1.10, as seen below, such that these latter cases will be similarly referred to the MSCP:

KEMA's Proposed Chapter 6, Section 5.1.10

5.1.10 The *EMC* shall report to the *market surveillance and compliance panel* for investigation any instances which the EMC reasonably considers to be a failure by or on behalf of a *market participant* to comply with the requirements of section 5.1.8, and shall provide any factors of which the EMC considers relevant to the circumstances of the failure to comply.

In order to incentivise the proposed 30-minute re-declaration obligations discussed in Section 3.1.1 of this paper, KEMA proposes the following penalty scheme:

$$\text{Minimum Penalty}^{15} = \text{Late Re-declaration Charge} \times \text{No. of MWs}$$

Where

- Late Re-declaration Charge: Value established by reference to VoLL (ultimate cost of the loss of capacity), with the initial value is proposed to be $0.15 \times \text{VoLL}^{16} = \text{\$750}$.
- Number of MWs: Set at the maximum MW scheduled for the unit in the dispatch period in which it is due to synchronise or in the following dispatch period if it is due to synchronise towards the end of the dispatch period

¹⁵ For example a 350MW unit which tripped completely and failed to re-declare within 30 minutes of the incident occurring would be subject to a penalty of at least S\\$262,500 ($0.15 \times \$5000/\text{MWh} \times 350\text{MW}$).

¹⁶ The VoLL is currently set at \\$5,000/MWh

KEMA concludes that that the proposed requirement for GRFs to re-declare and the associated penalty when they fail to do so will ensure that they have the correct incentives to re-declare their availability in a timely manner.

3.2.2 Analysis of KEMA's proposed penalty mechanism

The SWEM was built on the principle of self-commitment to drive efficiencies and offer increased commercial sovereignty¹⁷. Generation companies are expected to have the best knowledge of their portfolios and thus in the best position to assess the operational capabilities of their GRFs and any associated risks. Dispatch coordinators are thus given both the flexibility of submitting offers (or re-offers), as well as the responsibility to comply with their dispatch instructions.

KEMA's proposed penalty mechanism contradicts this principle of self-commitment by requiring dispatch coordinators to re-declare their GRFs' (un)availability, even if they are confident of meeting their scheduled outputs following a trip or failure to synchronise.

In any case, Chapter 5, Section 9.6.1 of the Market Rules already requires GRFs to comply with their dispatch instructions. It is thus in the best interests of the dispatch coordinator to re-declare (if this is not in violation of 10.4.1), or he may be penalised for failing to comply with dispatch instructions. In addition, Chapter 5, Sections 9.6.4 to 9.6.6 of the Market Rules also empowers the PSO to request that the dispatch coordinator revise its offers if the deviation has an adverse impact on system reliability.

Imposing financial penalties on GRFs that fail to comply with their dispatch instructions if they do not have acceptable reasons should, in itself, already ensure that GRFs are incentivised to revise their offers to reflect their ability to comply with dispatch instructions. Thus, we do not recommend supporting KEMA's proposal.

4. CONCLUSION

The existing Market Rules are sufficient in enforcing re-declaration obligations from a legal perspective. In addition, KEMA's proposed penalty mechanism runs contrary to the SWEM's design principle of self-commitment. Penalising GRFs that fail to comply with their dispatch instructions without acceptable reasons would already incentivise them to revise their offers to comply with their dispatch instructions.

Nevertheless, this review proposes to make rule changes to clarify that the existing gate closure rules supersedes the existing re-declaration rules.

5. IMPACT ON MARKET SYSTEMS

The proposed rule modifications set out in Annex 2 will not require any system changes.

6. INDUSTRY CONSULTATION

EMC published the above proposal for industry comments on 27 July 2010, and the following comments were received.

Comments from Senoko Energy Pte Ltd

We agree with EMC's analysis that KEMA's proposal represents a relaxation, rather than a tightening, of the market rules on redeclaration. Therefore, we do not support the proposal.

¹⁷ PHB Hagler Bailly (2000), "Memorandum on Wholesale Market Design to the Public Utilities Board" page 3

In addition, we disagree with KEMA's analysis that a penalty is necessary to "incentivise" gencos to make prompt re-declarations. Currently, dispatch coordinators are not only subject to market rules on re-declaration but also PSO's instructions. The penalty mechanism could also have the unintended effect of reducing available capacity to the system more than necessary. After a forced outage, it is fairly common for GRFs to attempt to run the unit back as soon as possible, sometimes within the 30 minutes limit stipulated by KEMA. Imposing a penalty for not re-declaring could lead to dispatch coordinators being overly cautious and declaring the unit unavailable for the following period, when this is not necessary. We therefore do not support the proposed penalty.

EMC's Response

We note Senoko Energy's comments.

Comments from Tuas Power Generation Pte Ltd

Risk of Double Penalty for the same incident/Incorrect emphasis

We know of no systems elsewhere where a same incident can attract penalties of significant financial penalties twice. EMA itself has already proposed a penalty scheme which can only be avoided if only one is able to achieve a perfect operational record (i.e. no forced outage). The change proposed by KEMA is in addition to that and subsequent to a player being unable to take certain actions following an event within a very tight timeframe. The penalty will thus only serve to drive behavior to avoid commercial penalties while achieving little to promote the proper emphasis following a forced outage which should be on power system stability and safety of plant and personnel. We agree with EMC's conclusion that current market rules that already penalizes GRFs for failure to comply with their dispatch instructions without acceptable reasons already achieve the objective of incentivizing generators to revise their offers following a trip or failure to synchronise.

EMC's Response

We note Tuas Power Generation's comments.

Comments from Tuas Power Generation Pte Ltd

30 minute time limit too onerous

Even if a requirement were to be put in place for re-declaration, we should note that the plant operator's main focus immediately following a trip or failure to synchronise should be the safe operation of plant and personnel. In addition, during non-office hours, there is a practical interval to contact relevant personnel to submit a re-declaration of capacity to the market operator. A 30-minute interval is an onerous obligation while a 1-hour interval for any scheme is much more practical. Expectation of almost immediate response can only be met by round the clock staffing which only adds to costs which eventually will have to be passed on to consumers.

EMC's Response

The paper showed that KEMA's proposed 30-minute re-declaration time lag would result in an untimely price signal of actual supply conditions in the system, as compared to the existing Chapter 6, Section 5.1.5 of the Market Rules, which requires a dispatch coordinator to immediately re-declare the GRF's availability upon reasonable expectation of a variation in its output. As such, it follows that Tuas Power Generation's proposed 1-hour lag, would result in the same issues associated with KEMA's proposed 30-minute time lag. We re-iterate that it is the dispatch coordinator's responsibility to assess the operational feasibility of the GRFs and in turn, determine if an immediate re-declaration of availability is required.

Comments from Tuas Power Generation Pte Ltd

Other means of removing distortion to market signals caused by late submission of re-declaration

One of the reasons cited in the proposal by KEMA was to remove the artificial suppression of more reflective spot prices. However a heavy-handed approach has been recommended. We note that since the market rules already allowed for a pricing re-run in the event that modeled conditions did not reflect reality (load shedding in MCE/no load shedding in actual system), a similar approach would effectively solve the same problem without resorting to the heavy-handed approach, i.e. a pricing re-run is initiated with the absence of the affected unit's offer if there was no re-declaration. However, the end objective to incentivise a generator to submit a re-declaration as soon as practical is also recognized. This could be achieved through our counterproposal below.

EMC's Response

As discussed in an earlier paper on the review of price revision in the SWEM, spot prices are determined based on prevailing market conditions at the time that the MCE is run (i.e. T-5 minutes)¹⁸. Under situations whereby price revision takes place, the original offers that have been validated and accepted by the MCE are still used as inputs to the revised run. This practice is supported in another study¹⁹ which found that in other ex-post markets, ex-ante offers from generators are nonetheless used to determine prices.

Tuas Power Generation's proposal to exclude the affected unit's offers ex-post runs contrary to the SWEM's ex-ante pricing regime (and even that of other ex-post pricing markets).

Comments from Tuas Power Generation Pte Ltd

Alternative proposal

A pricing re-run is carried out with the affected unit's offers removed from the system once a trip or failure to synchronise occurs. After the proposed 1 hour threshold is breached, failure to submit a re-declaration will attract increasingly higher amount of administrative fees (for example \$1000, \$3000, \$5000, \$10000 for each subsequent half hour of failure to submit a re-declaration), subjected to revision by MSCP. In addition, each failure should be made public – the risk of reputational damage would serve as a highly effective incentive for players to submit re-declarations promptly.

EMC's Response

As discussed in Section 3.2.2 of this paper, penalising GRFs that do not comply with dispatch instructions will already incentivise them to revise their offers to ensure that they meet their dispatch instructions. Therefore, penalties should be imposed on a failure to comply with dispatch instructions sent out by PSO, rather than Tuas Power Generation's proposal of failure to re-declare availabilities.

As for non-compliance with dispatch instructions, the Market Rules already provides that in determining the amount of financial penalties, the Market Surveillance and Compliance Panel (MSCP) can take into account the length of time a breach remains unresolved and the rate of recurrence of non-compliance.

¹⁸ Refer to "RC272: Changes Arising from the Review of Price Revision in the Singapore Wholesale Electricity Market (SWEM)"

¹⁹ Refer to "CP24: Proposed Extension of Type 4 Price Re-runs"

Thus we do not support the proposal.

Comments from Sembcorp Cogen Pte Ltd

Our request is for EMC to work with EMA on all related proposed rule changes and to study it in a holistic manner. This request arises from the recent policy paper on penalty for deviation of dispatch, which is somewhat related to the penalty proposal by KEMA, a consultant engaged by EMA. The request is intended to avoid unnecessary duplication and overlapping of work and proposals.

EMC's Response

As we do not support KEMA's proposed penalty scheme, it would not be necessary to undertake any further analysis on this proposal with EMA.

7. LEGAL SIGN OFF

The text of the rule modification has been vetted by EMC's external legal counsel, whose opinion is that the modification reflects the intended purposes as stated in the third column of the Table in Annex 2, entitled "Reasons for Rule Change".

8. DELIBERATION BY THE RCP

At the 51th RCP meeting, the RCP considered the proposed rule modifications to make clear the existing Market Rules on gate closure should supersede the current Market Rules on re-declaration of offers. By majority vote, the RCP supported the proposed rule modifications.

The following Panel members VOTED to support the rule modification:

Mr. Robin Langdale
Mr. Kng Meng Hwee
Mr. Daniel Lee
Mr. Luke Peacocke
Mr. Kenneth Lim
Mr. Lawrence Lee

The following Panel members VOTED NOT to support the rule modification:

Mr. Philip Tan

9. RECOMMENDATIONS

With a vote of 7 for and 1 against, the RCP recommends by majority that the EMC Board

- a. **do not support** KEMA's proposed rule modifications and penalty scheme;
- b. **adopt** the proposed rule modifications set out in Annex 2;
- c. **seek** EMA's approval on the rule modification proposal; and
- d. **recommend** that the modification proposals as set out in Annex 2 come into force **one business day** after the date on which the approval of the Authority is published by the EMC.

ANNEX 1: Rajah and Tann LLP's Memo

**RAJAH
TANN**

ENERGY MARKET COMPANY PTE LTD
238A Thomson Road
#11-01 Novena Square Tower A
Singapore 307684

Attn: Mr. Paul Poh

SENDER'S REF	RECIPIENT'S REF	DATE	PAGE
RLY/LLY/lay/211547/0011	-	16 July 2010	1/10

**LEGAL ANALYSES OF PROPOSED MARKET RULE MODIFICATIONS
SUGGESTED BY KEMA INTERNATIONAL B.V.**

Dear Sirs,

1. Instructions

- 1.1. We are provided, in an email from Ms. Nerine Teo on 12 April 2010, a copy of the Final Report dated 12 May 2009 issued by KEMA International B.V. ("KEMA") titled "Review of Economic Incentives for Generator Reliability" ("Report").
- 1.2. We are also provided, in a separate email from Ms. Nerine Teo on 13 April 2010, with a copy of KEMA's 'Response to Participant Feedback' dated 12 May 2009 in respect of the Report ("Response to Feedback"). The Response to Feedback contains the feedback received by KEMA in the course of its industry consultations in respect of the Report, and also contains KEMA's responses to such feedback.
- 1.3. We note that two new sections 5.1.8 and 5.1.9 have been proposed by KEMA in Appendix 1 of the Report for inclusion in Chapter 6 of the current Market Rules ("Proposed Modifications").
- 1.4. We are instructed to review the Proposed Modifications and advise EMC on whether the Proposed Modifications proposed to be made to the current Market Rules for the purpose of meeting the KEMA Objectives (discussed further below) are, purely from a legal perspective only, strictly necessary in view of the existing provisions of the Market Rules.
- 1.5. We are instructed that that the Report and the Response to Feedback are provided to us solely to provide relevant background and contextual information relevant to our consideration and response to the query raised in

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- 1.4. We are not required to review, and we accordingly (save as strictly required for our analyses of the KEMA Observations and KEMA Objectives discussed below) do not comment on, any other part or aspect of the Report or the Response to Feedback.
- 1.6. Our analyses only herein are based on a literal construction of the existing Market Rules, the Proposed Modifications, the Report and the Response to Feedback and on the EMC's instructions (which we assume to be correct without further investigation) on all operational, administrative, procedural, practical, technical, economic, financial, tax or commercial issues relevant to the present subject matter. Unless otherwise indicated herein, we have also generally assumed that the facts stated in the Report and Response to Feedback and KEMA's findings and observations therein (other than the legal issues discussed herein) to be accurate and correct.
- 1.7. Our analyses herein is for the sole benefit of the EMC in respect of the present subject matter, and may not be relied upon by any other person or for any other purpose other than as stated herein.

2. The Report - Some Observations

- 2.1. From our review of the Report and the Response to Feedback, it appears to us that the Proposed Modifications are proposed by KEMA on the basis of the following observations by KEMA ("KEMA Observations") (with emphasis added below):
- (a) *"One issue we did observe was that the plant that tripped did not always re-declare its unavailability to the market immediately. This on some occasion resulted in market prices not rising due to the trip or not rising as quickly as expected. The result is that of lower risk (and therefore lower reliability incentive) to the tripping generator that does not re-declare, and a lower incentive to other generators to offer more energy to take up the shortfall. This was partly due to the market Gate Closure. A generator that re-declares its availability inside the Gate Closure period may be referred to the Market Surveillance and Compliance Panel (MSCP). The market rules do, however, provide for but do not require re-declaration in these circumstances." (See page 6 of the Report.)*
- (b) *"**4.4.4 Rules for Re-declaring Availability.** The Market Rules covering this requirement are set out in Chapter 6 Section 10.4.1.1 b. The full Clause 10.4.1 of the Market Rules states: ... The above wording appears to "allow" rather than "require" generators to re-declare immediately, irrespective of Gate Closure, when a trip occurs." (See pages 51 and 52 of the Report.)*

- (c) *"It can be seen from the above table, that in 2007 the MSCP deemed there to be no breaches of the Market Rules involving generators bidding after Gate Closure. However, the observations made above regarding the behaviour of generators in circumstances of trips and failing to comply with instructions to generate seem, in the absence of other evidence (presumably made available to the MSCP when considering each of the circumstances) to appear to conflict with these conclusions. This may be due to the lack of clarity in the Market Rules themselves, which could limit the ability of the MSCP to categorically deem a breach and thus taking any action." (See page 53 of the Report.)*
- (d) *"KEMA note that there are other requirements contained within the Market Rules for such re-declarations – such as section 5.1.6 of Chapter 6 - but KEMA considers that the wording needs to be tightened - use of the wording "reasonably expects" in section 5.1.5 of Chapter 6 of the Market Rules provides a degree of latitude to the generators which KEMA considers that it may not be appropriate in all circumstances." (See page 54 of the Report.)*
- (e) *"KEMA's opinion is that the present rules that allow a participant to declare unavailability within gate closure are weak and should be replaced with a requirement to declare a change in availability when it occurs." (See section 4.2.2 of the Response to Feedback.)*
- (f) *"KEMA does not suggest that a participant wait 30 minutes before re-declaring but simply that failure to do so will attract an automatic penalty." (See section 4.3.2 of the Response to Feedback.)*
- (g) *"... KEMA does recommend that if a participant knows it is unable to meet its dispatch it should notify the market immediately." (See section 4.4.2 of the Response to Feedback.)*
- (h) *""Reasonably expects" is not as direct as "requires" and is open to interpretation. ... In KEMA's opinion, the current rules need to be reinforced to require re-declarations by generators in the event of a trip or failure to synchronise. The analysis undertaken and presented in the report suggests that the latitude provided for in the current wording of the rules may result in market prices being suppressed, may prevent other market participants from providing services and may impact system security." (See section 4.5.2 of the Response to Feedback.)*

- 2.2. Flowing from the above KEMA Observations, the Proposed Modifications are stated in the Report to be recommended by KEMA for the purposes of fulfilling the objectives ("KEMA Objectives") outlined in the extracts (with emphasis added) below:

- (a) *"We recommend that changes are introduced to Section 10.4 of Chapter 6 so that the rules require re-declaration to the new availability in the event of a trip, and immediately on a generator knowing that a scheduled unit cannot be synchronised on time – proposed draft text for this change is included in Appendix 1 to this document."* (See section 6.2.1, page 72 of the Report.)
- (b) *"Appendix 1 provides an outline specification of the changes and/or additions required to the Market Rules in relation to the proposed change set out in Item 1 in section 6.2 above – i.e. strengthen the rules to require re-declarations in the event of a trip and when a generator knows that a scheduled unit cannot be dispatched on time."* (See Appendix 1 on page 76 of the Report.)
- (c) *"The proposed 5.1.9 is necessary to account for generators submitting notifications inside the Gate Closure period. It is separate from 5.1.8 as they may, at the same time, submit notifications that extend into Dispatch Periods for which Gate Closure has not occurred at the time of submission."* (See Appendix 1 on page 76 of the Report.)

- 2.3. For ease of reference, KEMA's Proposed Modifications (with emphasis added) are as follows:

- 5.1.8 *An offer variation or revised standing offer reflecting the revised capability of a generation registered facility shall be submitted by or for a market participant as soon as practicable and no later than 30 minutes after the occurrence of either:*
- a. *forced outage or;*
 - b. *failed attempt at synchronisation.*
- 5.1.9 *Where an offer variation or revised standing offer is submitted in accordance with 5.1.8 and is submitted within 65 minutes immediately prior to the despatch period to which the offer variation or revised standing offer applies, such offer variation or revised standing offer shall comply with the requirements of 10.4.1."*

- 2.4. Before proceeding with our analyses in the next section, we make the following observations:
- (a) the Proposed Modifications are intended to "strengthen" the Market Rules "to require re-declaration" (see above extracts of Appendix 1), on the basis of the KEMA Observations (which we have extracted in paragraph 2.1 above). Accordingly, for the purposes of our analyses herein, the KEMA Objectives must be read together with, and understood in the context of, the KEMA Observations;

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- (b) although section 6.2.1 of the Report “recommended that changes are introduced to Section 10.4 of Chapter 6” of the Market Rules, the Proposed Modifications contained in Appendix 1 of the Report are confined only to the insertion of a new section 5.1.8 and a new section 5.1.9 into Chapter 6. Appendix 1 further stated that “*KEMA do not propose to alter section 10.4.1 itself since there are wider implications associated with Gate Closure, hence the proposal is to introduce a specific rule to work alongside section 10.4.1*”;
- (c) we have some difficulty reconciling the requirements of KEMA’s Proposed Modifications with the statements made by KEMA in sections 4.2.2 and 4.4.2 of KEMA’s Response to Feedback. (See extracts thereof in paragraphs 2.1(e) and 2.1(g) above.) KEMA’s proposed section 5.1.8 only requires “re-declaration” “*as soon as practicable and no later than 30 minutes after the occurrence of either a forced outage or a failed attempt at synchronisation*” which does not strictly impose an obligation to immediately “re-declare” unavailability upon a forced outage or failed synchronisation;
- (d) we observe that there are some apparent differences between section 5.1.5 of Chapter 6 and KEMA’s proposed section 5.1.8, namely:
- (i) section 5.1.5 contains a threshold, which threshold must be exceeded before a dispatch co-ordinator attracts any obligation under that section to submit any offer variation, but such a threshold is absent in KEMA’s proposed section 5.1.8. The existence and effect of such threshold in section 5.1.5 does not appear to be commented upon by KEMA in its Report. We have therefore assumed that such threshold did not influence KEMA’s Proposed Modifications and will not have any material effect on the KEMA Objectives;
 - (ii) section 5.1.5 only applies in a scenario where there is a valid offer for the relevant registered facility. It is less clear whether section 5.1.8 can apply if there is no such valid offer for the generation registered facility. However, the reference to offer variations and revised standing offers in the proposed section 5.1.8 appears to imply that there must be some pre-existing valid offer or standing offer which such offer variations or revised standing offers required under the proposed section 5.1.8 are to modify or supersede;

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- (iii) section 5.1.5 (if applicable) only requires an offer variation to be submitted, but not revised standing offers. In this regard, we assume that a forced outage or a failed attempt to synchronise generally would not affect the standing capability of the relevant facility and that the requirement in the proposed section 5.1.8 for submission of revised standing offers would not be necessary and is sufficiently addressed in the existing section 5.1.7; and
- (iv) section 5.1.5 imposes an obligation on a dispatch co-ordinator to submit the offer variation, but the proposed section 5.1.8 requires the market participant to submit the offer variation or the revised standing offer. For the purposes of the KEMA Objectives, we assume that it makes no material difference which party effects the "re-declaration", so long as it is in fact effected,
- (e) it is not clear to us what KEMA intended to mean by "re-declaration" or "trip". We infer from KEMA's Proposed Modifications that (i) "re-declaration" is intended by KEMA to refer to the submission of either offer variations or revised standing offers by the dispatch co-ordinator of the relevant generation facility that "tripped"; and (ii) "trip" is intended by KEMA to refer to a forced outage of, or a failure to synchronise by, the aforesaid generation facility.

If the foregoing inferences, assumptions and observations are inaccurate or incorrect (whether from a technical, operational or other perspective), please let us know as this may affect the discussions below.

3. Our Analyses

- 3.1. Having considered the Proposed Modifications against the KEMA Objectives (and the KEMA Observations), and flowing from our observations in paragraph 2.4 above, we do not regard all aspects of the Proposed Modifications as strictly necessary in view of certain existing provisions of the Market Rules. That said however, we agree that, if desired by the EMC, there remains room for improving the drafting of the Market Rules.
- 3.2. In arriving at the view above, and except as stated in paragraph 3.3 below, we have assumed that the apparent differences between section 5.1.5 and the proposed section 5.1.8 (as outlined in paragraph 2.4(d)) do not have any material impact on whether the existing Market Rules would be adequate to meet the KEMA Objectives (considered in the context of the KEMA Observations).

3.3. We have arrived at the view stated in paragraph 3.1 above, for the following reasons:

- (a) Section 5.1.5 of Chapter 6 of the current Market Rules already imposes an obligation on (i.e. already "requires") a dispatch co-ordinator of a registered facility to submit an offer variation if the dispatch co-ordinator reasonably expects a shortfall in quantity available from that registered facility. Moreover, section 5.1.6 also already imposes an obligation to have offer variations or revised standing offers offering zero quantities in place for the duration where the registered facility is not synchronised. Given the existence of sections 5.1.5 and 5.1.6 of Chapter 6, we therefore do not agree with the KEMA Observation (extracted in paragraph 2.1(a)) that the "market rules ... do not require re-declaration ...".¹

However, as outlined in paragraph 2.4(d)(i), section 5.1.5 contains a threshold, which threshold must be exceeded before a dispatch co-ordinator attracts any obligation under that section to submit any offer variation, but such a threshold is absent in the proposed section 5.1.8. If EMC desires that an offer variation be submitted upon the occurrence of a forced outage regardless of the threshold being exceeded, the current Market Rules should accordingly be revised to include such an additional requirement. In such a scenario, care should be taken in drafting the additional requirement so that the difficulties highlighted in paragraph 3.3(b)(iii) below do not arise.

- (b) KEMA's proposed new section 5.1.8 requires an offer variation or revised standing offer to be submitted in respect of a generation registered facility "as soon as practicable and not later than 30 minutes of the occurrence of a forced outage or a failed attempt to synchronise". In this regard:
- (i) the market participant or the dispatch co-ordinator is thus allowed up to 30 minutes after the occurrence of a forced outage or a failed attempt to synchronise. In contrast, section 5.1.5 requires immediate re-declaration, not upon the occurrence of a shortfall, but upon the dispatch co-ordinator having a reasonable expectation of a shortfall. This arguably means that section 5.1.5 requires an offer variation to be made immediately upon the occurrence of a forced outage or failed

¹ As earlier indicated, we assume that the finer distinctions between section 5.1.5 and the proposed 5.1.8 do not affect or influence this KEMA Observation, in respect of which there is no comment in the Report or the Response to Feedback.

attempt to synchronise. This is given that when a forced outage or failed synchronisation in fact occurs, we envisage that it may be difficult for a dispatch co-ordinator to be able to say that he has no "reasonable expectation" of the event that has already occurred, since he is required to have operational control of the registered facility under Section 5.2.6.3 of Chapter 2 of the Market Rules and could be taken to have actual knowledge of that event. In addition, if the circumstances of the case are such that the dispatch co-ordinator has a reasonable expectation of a quantity shortfall even before the actual occurrence of a forced outage or failed attempt to synchronise, the dispatch co-ordinator would be required by the existing section 5.1.5 to immediately re-declare upon forming that reasonable expectation of quantity shortfall. The proposed section 5.1.8 thus allows the relevant market participant or dispatch co-ordinator greater latitude as to when to submit an offer variation than section 5.1.5 of Chapter 6. We would have thought that such latitude inherent in the proposed section 5.1.8 would result in the market prices taking longer to rise than would the existing section 5.1.5, which is the very criticism made against the existing Market Rules in the extracted KEMA Observations in paragraphs 2.1(a) and 2.1(h):

- (ii) it is difficult to see how the time allowed for "re-declaration" under the proposed section 5.1.8 is consistent with the KEMA Observations in sections 4.2.2 and 4.4.2 of KEMA's Response to Feedback (see extracts thereof in paragraphs 2.1(e) and 2.1(g) above); and
 - (iii) moreover, the proposed introduction of section 5.1.8, without consequent amendment(s) to section 5.1.5 or section 5.1.6 would result in the "re-declarations" under all three sections co-existing side-by-side, which may at worst result in inconsistent obligations being imposed on market participant / dispatch co-ordinator, or at best result in the market participant / dispatch co-ordinator being subject to multiple "re-declaration" obligations.
- (c) We do not agree with KEMA's observation that the expression "reasonably expects" in the existing section 5.1.5 of Chapter 6 renders the provision too lax (see extract of the KEMA Observation in paragraph 2.1(d) and 2.1(h)). If, upon the occurrence of a forced outage or a failure to synchronise, a dispatch co-ordinator having operational control of the relevant facility would not be in a position to reasonably

say that he has no expectation of a shortfall in quantity, and barring instantaneous recovery from such outage or synchronisation failure, we would have thought that the dispatch co-ordinator would be required to immediately “re-declare” under section 5.1.5. If so, then section 5.1.5 may be more stringent (not more lax) than section 5.1.8, since section 5.1.5 not only requires re-declaration upon actual occurrence of, but also prospective/future expectations of shortfall arising from, forced outages and synchronisation failures.

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- (d) We also observe that section 10.4.1, on its face, is only intended to impose a gate closure in the nature of a prohibition of offer variations or revised standing offers after a certain cut-off time, but with certain exceptions to the prohibition which “allow” offer variations or revised standing offers under certain limited circumstances. The requirement for “re-declaration” is instead set out in sections 5.1.5, 5.1.6 and 5.1.7 of Chapter 6. From our reading of section 4.4.4 of the Report, entitled “Rules for Re-declaring Availability”, KEMA did not seem to acknowledge the existence of sections 5.1.5, 5.1.6 and 5.1.7 of Chapter 6. KEMA’s comments in section 4.4.4 of the Report (see extract in paragraph 2.1(b) above) should therefore only be read to apply to section 10.4.1 of Chapter 6.

Having said that, we think there is room to raise the argument to the effect that compliance with section 5.1.5, 5.1.6 or 5.1.7 either should not lead to a breach of section 10.4.1, or would fall within one of the four exceptions in section 10.4.1.1. If this is not intended by the EMC or if it is intended by the EMC that a “re-declaration” must always be made (even if it means that such “re-declaration” would lead to a breach of section 10.4.1), the Market Rules may need to be amended to introduce greater clarity as to how the gate closure prohibition under section 10.4.1 operates vis-à-vis the “re-declaration” obligations under sections 5.1.5, 5.1.6 and 5.1.7.

-
- (e) We note KEMA’s comment that the proposed section 5.1.9 is intended to work alongside section 10.4.1 (see paragraph 2.4(b) above) and to “account for generators submitting notifications inside the Gate Closure period” (see paragraph 2.2(c) above). We note that the proposed section 5.1.9 contemplates a re-declaration inside the gate closure period. We also note that the proposed section 5.1.9 requires that an offer variation or revised standing offer made in accordance with section 5.1.9 “shall comply with the requirements of 10.4.1”.

It is not clear to us how section 5.1.9 is intended by KEMA to operate. Section 10.4.1, on its face, imposes a gate closure in the nature of a

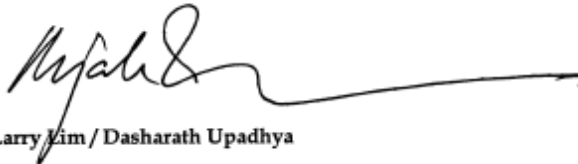
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prohibition of offer variations or revised standing offers after a certain cut-off time (unless under a specific exception in section 10.4.1). If a specific exception in section 10.4.1 does not apply, it is difficult to see how a re-declaration after gate closure (to which section 5.1.9 would apply) could comply with section 10.4.1 as contemplated in the Proposed Modifications.

If instead, it is KEMA's intent that greater clarity be introduced to the Market Rules to provide guidance on how the gate closure prohibition under section 10.4.1 operates vis-à-vis the "re-declaration" obligations under sections 5.1.5, 5.1.6 and 5.1.7, then there remains room for rule modifications to be made to the Market Rules.

4. We trust that this is of assistance to you. Should you require any further assistance, please do not hesitate to contact us.

Yours faithfully,



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ANNEX 2: Proposed Market Rules Changes

Current Market Rules (1 January 2010)	Proposed Rule Changes (Deletions represented by strikethrough text and additions represented by double underlined text)	Reasons for Rule Change
<u>CHAPTER 6</u>	<u>CHAPTER 6</u>	
<p>5.1.5 For any <i>dispatch period</i> in the current <i>market outlook horizon</i>, if the quantity currently <i>offered</i> in a valid <i>offer</i> for a <i>registered facility</i> exceeds the relevant quantity that its <i>dispatch coordinator</i> reasonably expects to be available from the <i>registered facility</i> by more than:</p> <p>5.1.5.1 10 MW; or</p> <p>5.1.5.2 5 percent of the quantity currently <i>offered</i>,</p> <p>whichever is greater, then that <i>dispatch coordinator</i> shall immediately submit an <i>offer variation</i> for that <i>registered facility</i> to the <i>EMC</i>.</p>	<p>5.1.5 <u>Subject to section 10.4.1</u>, Ffor any <i>dispatch period</i> in the current <i>market outlook horizon</i>, if the quantity currently <i>offered</i> in a valid <i>offer</i> for a <i>registered facility</i> exceeds the relevant quantity that its <i>dispatch coordinator</i> reasonably expects to be available from the <i>registered facility</i> by more than:</p> <p>5.1.5.1 10 MW; or</p> <p>5.1.5.2 5 percent of the quantity currently <i>offered</i>,</p> <p>whichever is greater, then that <i>dispatch coordinator</i> shall immediately submit an <i>offer variation</i> for that <i>registered facility</i> <u>for that <i>dispatch period</i></u> to the <i>EMC</i>.</p>	<p>To make clear that (1) section 5.1.5 is subject to section 10.4.1, and (2) the offer variation required to be submitted must be for dispatch period with the expected shortfall.</p>
<p>5.1.6 For each <i>dispatch period</i> that a <i>registered facility</i> is not <i>synchronised</i> and until the earliest <i>dispatch period</i> in which it would be possible for that <i>registered facility</i> to be <i>synchronised</i>, its <i>dispatch coordinator</i> shall:</p> <p>5.1.6.1 submit <i>offer variations</i> where there are existing <i>offer variations</i>; or</p>	<p>5.1.6 <u>Subject to section 10.4.1</u>, Ffor each <i>dispatch period</i> that a <i>registered facility</i> is not <i>synchronised</i> and until the earliest <i>dispatch period</i> in which it would be possible for that <i>registered facility</i> to be <i>synchronised</i>, its <i>dispatch coordinator</i> shall:</p> <p>5.1.6.1 submit <i>offer variations</i> where</p>	<p>To make clear that section 5.1.6 is subject to section 10.4.1.</p>

Current Market Rules (1 January 2010)	Proposed Rule Changes (Deletions represented by strikethrough text and additions represented by double underlined text)	Reasons for Rule Change
<p>5.1.6.2 submit revised <i>standing offers</i> where there are no <i>offer variations</i>, so that all the <i>offered</i> quantities are zero.</p>	<p>there are existing <i>offer variations</i>; or</p> <p>5.1.6.2 submit revised <i>standing offers</i> where there are no <i>offer variations</i>, so that all the <i>offered</i> quantities are zero.</p>	
<p>5.1.7 The <i>dispatch coordinator</i> of a <i>registered facility</i> shall, to the extent necessary for consistency with any <i>standing capability data</i> that is revised and approved under section 4, submit revised <i>standing offers</i> and <i>offer variations</i> that apply from the time that revised <i>standing capability data</i> takes effect.</p>	<p>5.1.7 <u>Subject to section 10.4.1</u>, The <i>dispatch coordinator</i> of a <i>registered facility</i> shall, to the extent necessary for consistency with any <i>standing capability data</i> that is revised and approved under section 4, submit revised <i>standing offers</i> and <i>offer variations</i> that apply from the time that revised <i>standing capability data</i> takes effect.</p>	<p>To make clear that section 5.1.7 is subject to section 10.4.1.</p>
<p>10.4.1 No <i>offer variation</i> or revised <i>standing offer</i> shall be submitted by or for a <i>market participant</i> within 65 minutes immediately prior to the <i>dispatch period</i> to which the <i>offer variation</i> or revised <i>standing offer</i> applies, except:</p> <p>10.4.1.1 where it is intended:</p> <p>a. for a <i>generation registered facility</i>, to reflect its expected ramp-up and ramp-down profiles during periods following <i>synchronisation</i> or preceding <i>desynchronisation</i>; or</p>	<p>10.4.1 <u>Notwithstanding sections 5.1.5, 5.1.6 and 5.1.7</u>, <u>no</u> <i>offer variation</i> or revised <i>standing offer</i> shall be submitted by or for a <i>market participant</i> within 65 minutes immediately prior to the <i>dispatch period</i> to which the <i>offer variation</i> or revised <i>standing offer</i> applies, except:</p> <p>10.4.1.1 where it is intended:</p> <p>a. for a <i>generation registered facility</i>, to reflect its expected ramp-up and ramp-down profiles during periods following <i>synchronisation</i> or</p>	<p>To correct a typographical error in limb (b). To make clear that (1) section 10.4.1 applies, notwithstanding sections 5.1.5, 5.1.6 and 5.1.7, and (2) the exceptions in 10.4.1.1(c) and 10.4.1.1(d) only apply respectively to offer variations or revised standing offers which are intended to contribute positively to the resolution of energy surplus</p>

Current Market Rules (1 January 2010)	Proposed Rule Changes (Deletions represented by strikethrough text and additions represented by double underlined text)	Reasons for Rule Change
<p>b. for a <i>generation registered facility</i>, to reflect its revised capability during a <i>forced outage</i>; or</p> <p>c. to contribute positively to the resolution of an <i>energy</i> surplus situation by allowing for decreased supply of <i>energy</i>; or</p> <p>d. to contribute positively to the resolution of <i>energy, reserve</i> or <i>regulation</i> shortfall situations by allowing for increased supply of <i>energy, reserve</i> or <i>regulation</i>; and</p> <p>10.4.1.2 where the price so offered, other than for additional quantities of <i>energy, reserve</i> or <i>regulation</i>, is the same as that previously offered for that <i>dispatch period</i>.</p>	<p>preceding <i>desynchronisation</i>; or</p> <p>b. for a <i>generation registered facility</i>, to reflect its revised capability during a <i>forced outage</i>; or</p> <p>c. to contribute positively to the resolution of an <i>energy</i> surplus situation <u>pertaining to which the EMC has issued an advisory notice under section 9.3.1</u>, by allowing for decreased supply of <i>energy</i>; or</p> <p>d. to contribute positively to the resolution of <i>energy, reserve</i> or <i>regulation</i> shortfall situations <u>pertaining to which the EMC has issued advisory notices under section 9.3.1</u>, by allowing for increased supply of <i>energy, reserve</i> or <i>regulation</i>; and</p> <p>10.4.1.2 where the price so offered, other than for additional quantities of <i>energy, reserve</i> or <i>regulation</i>, is the same as that previously offered for that <i>dispatch period</i>.</p>	<p>or <i>energy, reserve</i> or <i>regulation</i> shortfall situations pertaining to which the EMC has issued advisory notices under section 9.3.1 of Chapter 6.</p>