

RCP PAPER NO. : **EMC/RCP/53/2011/CP28**

SUBJECT : **OBLIGATION TO REVISE OFFERS IN THE EVENT OF COMPLETE SYSTEM OUTAGE AT EMC**

FOR : **DECISION**

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### **Executive Summary**

There are market rules that oblige dispatch coordinators (DCs) to submit offer revisions under certain situations. The proposer suggested that the market manual should map out what the DCs should do when they are faced with such an obligation, yet EMC's NEMS systems are not available, whether due to planned or unplanned outages.

The market manual spells out the various channels that are available to the DCs to submit offers. It can be through the EMC's offer submission systems or any one of the backup submission procedures. For offer submissions received, EMC has certain obligations to process them. When EMC's NEMS systems are not available, EMC will not be able to process offer submissions and hence is unable to fulfill its obligations to the market rules as well.

However, EMC has to perform regular planned outages during which its systems will not be available. Such regular planned outages are carried out in order to fulfill EMC's license condition, which is in line with EMC's obligation to the Singapore electricity preparedness plan, and to keep the EMC NEMS systems in prime operating condition. A process is in place to ensure that all MPs and the PSO are aware of each planned outage in advance so that they can be prepared for it. A written notice of the planned outage is also submitted in advance by EMC to the MSCP since during the outage, EMC will technically not be able to fulfill certain obligations in the market rules. The MSCP has the power, under the market rules, to investigate / determine and take enforcement action due to the unavailability of EMC's systems during planned or unplanned outages.

This paper was published for comments on 26 August 2010 – no comments were received.

Given that backup submission procedures are in place for DCs to submit offers during system outage at EMC, the proposer's suggestion for additional procedures in the market manual is not necessary. In addition, there is comfort that rule breaches by EMC will be governed by the MSCP (e.g. investigation and determination on rule breach, including the taking of enforcement action). Thus, for this proposal, EMC does not recommend any changes to the market rules and market manual.

At the 53<sup>rd</sup> RCP meeting, the panel unanimously decided that no changes be made to the market rules and market manual.

## 1. Introduction

This paper discusses one of the issues prioritized in this financial year 2010/11 Rule Change Work Plan “Obligation to revise offers in the event of complete system outage at EMC”. The following paragraph gives an overview of the proposal.

There are market rules that oblige the dispatch coordinators (DCs) to submit offer revisions<sup>1</sup> in certain situations. The proposer suggested that EMC drafts a market manual to map out what the DCs are expected to do in situations where they have to submit such offer revisions, yet EMC’s NEMS systems<sup>2</sup> are not available, whether due to planned or unplanned outages.

## 2. Background

### 2.1 MP-DC obligations for offer revisions

At present, every registered facility must at all times have a valid standing offer for each service<sup>3</sup> it is registered to provide for every dispatch period. When a DC reasonably expects the current valid offer quantity for a registered facility to exceed the relevant quantity available from the facility by more than either 10MW or 5 percent of that offer quantity, the DC is obliged to submit an offer revision immediately. In the case of registered facility that is in-between synchronizations, appropriate offer variations and revised standing offers have to be submitted for the facility. Any approved revisions to the standing capability data of a registered facility will likewise require appropriate offer revisions. These requirements are set out in section 5.1 of chapter 6 of the market rules.

### 2.2 Submission methods

As required by section 3.5 of chapter 6 of the market rules, EMC has an electronic communications system (ECS) that allows for the submission of offers by DCs, the communication on acceptance or rejection of the offers, and the issuance of various types of dispatch schedules & associated pricing schedules. The applicable market manual list out and explain the protocols and procedures for the use of such ECS, as well as the methods of exchanging data/information in the event the ECS is unavailable.

There are various methods for DCs to submit offer revisions, these methods can be found in the market manual “Market Operations - Standing Offers, Offer Variations and Standing Data”. The manual clearly states that DCs have the option to use the NEMS offer management system (OMS), a web offering system (WebOffer), or a client and server setup using PowerBid to submit their offers and offer revisions. In the case where such methods of submission are not available or the ECS is not available, DCs will have to fall back on alternative backup submission procedures which allow for submissions by secured electronic mail in a CSV file format, by courier, by hand or any other means as

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<sup>1</sup> Includes standing offers and offer variations

<sup>2</sup> EMC’s NEMS Systems consist of :

- (i) Offer Submission System:- OMS, WebOffer, PowerBid, EMC approved applications
- (ii) Electronic Communications System
- (iii) Offer Validation System
- (iv) Market Clearing System
- (v) Settlement System

<sup>3</sup> Energy and/or Reserve and/or Regulation as the case may be.

may be permitted by the EMC. The procedures for backup submissions can be found in the document named "Market Participants Backup Submission", published on EMC's website.

### 2.3 EMC obligations following offer submissions

In accordance with section 5.6.1 of chapter 6 of the market rules, when EMC receives an offer submission, it is required to do the following:

1. Time stamp the offer when it is received; and
2. Within five minutes, confirm the receipt of the offer; and
3. Within five minutes, validate the offer in accordance with section 5.7.1 and release information indicating that the offer has either been accepted as valid, or rejected with reasons for doing so.

## 3 Analysis

### 3.1 The Issue

#### *Consequences of EMC's NEMS system outage*

As raised by the proposer, the contention occurs when a DC is obliged to submit offer revisions but the NEMS system is not available. When the NEMS system is unavailable, whether planned or unplanned, EMC will not be able to perform certain functions.

Specifically, the following functions will be disrupted:

- (i) Confirmation of receipt of offer; and
- (ii) Acceptance/rejection of offer submitted by a DC; and
- (iii) Validation of offer submissions; and
- (iv) Production of various dispatch schedules and their associated pricing schedules

Unless constrained by its own systems or circumstances, a DC who is obliged to submit offer revisions should do so through the available submission channels. When the NEMS system is not available, the DC will still be able to submit offers by choosing any of the three procedures stated in the backup submission document. In doing so, the DC would have fulfilled its obligations under the market rules and market manual.

### 3.2 Reasons and Process for planned outage

#### *Reasons*

There are two key reasons to place the NEMS systems on planned outage. One reason is to fulfill EMC license condition 17.2<sup>4</sup>, which is in line with its obligations to the Singapore emergency preparedness plan set out in section 12 of Chapter 5 of the market rules. The other reason is to keep the NEMS systems in prime operating condition.

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<sup>4</sup> EMC Licence Condition 17: Preparation for Emergencies and Security Arrangements

1. The licensee shall take such action as the Authority may reasonably require, taking into consideration the provisions of the market rules relating to emergency preparedness and restoration of the power system, to plan and prepare for emergencies, including taking part in tests and exercises
2. The licensee shall develop and implement such arrangements as are prudent to ensure the safety and, where reasonable practicable, the continuity of its operations in the event of an emergency taking into consideration the provisions of the market rules relating to emergency preparedness and restoration of the power system

On the first reason, as part of the Singapore electricity emergency plan and its licence condition, EMC is required to have its electricity preparedness plan (EPP) – this includes the plan, tests, information, communications and other elements as designated by PSO. On top of that, EMC is obliged to test its own backup control centres and associated procedures and facilities on a regular basis. EMC also participates in PSO-directed testing as part of the Singapore emergency preparedness plan and its restoration. As part of the tests, EMC will execute its disaster recovery plan, which will switch the NEMS systems from the production environment to the disaster recovery centre and inevitably requires the NEMS systems to be made unavailable (i.e. on outage) for a while.

On the second reason, planned outages are scheduled once a month by EMC Market Operations Information Technology (MOIT) to keep the NEMS systems in prime operating condition. During such time, IT may add enhancements to the systems (i.e. add new features, new project rollouts), repair hardware faults, upgrade hardware or do necessary re-configurations to support new features. In addition, IT may use this period to improve system performance by optimizing the NEMS' database. Lastly, IT will make necessary fixes to rectify any identified errors that prevent NEMS from performing as intended.

#### *Process*

Before a scheduled outage for the NEMS systems is implemented, the planned outage and schedule go through a change release process that requires the approval of the relevant IT heads and business owner. The Market Assessment Unit (MAU) is then notified via an official letter signed by the SVP of MOIT.

Once the schedule is confirmed, the first notification email is sent out about 1 week in advance, or shorter if it is an urgent maintenance, to all MPs and the PSO. The email notification will indicate the exact start and end time when the systems are unavailable as well as the reasons for the planned outage. This is to give all MPs and the PSO sufficient time to plan and be prepared for the planned outage. On the day of the planned outage, another notification email is sent out. A last email is sent out after the completion of the maintenance or the end of the planned outage.

### 3.3 Is it a rule breach?

When the NEMS systems are unavailable, EMC will not be able to perform its obligations as set out in section 3.1 of this paper. Thus, EMC would have breached the market rules – which require it to timestamp, confirm receipt and validate all offers within five minutes of receipt.

If it was a planned outage, EMC should self report the breach to MAU and send out notifications to all MPs and the PSO. If it was an unplanned outage, EMC would be required to report a rule breach to the MAU. For both planned and unplanned outages, EMC can be subjected to investigation and enforcement actions from the market surveillance compliance panel (MSCP).

For a breach of the market rules, the MSCP may investigate and make a determination on the breach (as set out in section 7.2.4 of chapter 3):

1. Determine if the party has not breached;
2. Determine that the party has breached only after the provisions in section 7.2.6 of chapter 3 are fully satisfied (which is to allow the party in breach a chance to appear before the MSCP to defend the allegations, if the party had requested a hearing);
3. Request further relevant information in relation to the alleged breach;
4. Direct MAU and PSO to conduct further investigation.

Further to that, the MSCP may choose to take enforcement actions, including directing EMC to pay a financial penalty (as set out in section 7.2.8 of chapter 3):

1. Direct the EMC to take certain actions necessary to comply with the market rules, the market manual or system operation manual;
2. Direct the EMC to cease, within a specified time, the act, activity or practice constituting the breach;
3. Direct the EMC to comply with additional or more stringent record-keeping or reporting requirements;
4. Issue a non-compliance letter to EMC;
5. Direct the EMC to pay a financial penalty determined in accordance with section 7.2.11 of Chapter 3 of the market rules, unless the MSCP is satisfied that the breach could have been avoided by the exercise of due diligence or the EMC had acted intentionally;
6. Make an award for costs arising from the breach.

### 3.4 Considerations

The reasons for planned outages are clearly in the interest of the Singapore Wholesale Electricity Market in terms of keeping the NEMS systems robust and being prepared for emergency through regular testing. These tests are done to ensure that EMC is in line with the Singapore electricity emergency preparedness plan.

Furthermore, EMC has processes in place to give advance notice to all MPs and the PSO for each planned outage so that these parties have time to plan their activities ahead of planned outages. Nevertheless, there could be circumstances that require MPs to fulfill their obligations to the market rules or require the PSO to over-ride current/prior dispatch instructions during those periods when the NEMS systems are on planned outage. For as long as MPs are not constrained by their own resources or ability, they should fulfill their obligations toward the market rules, market manual and system operation manual.

Nevertheless, during outages when the NEMS systems are unavailable, EMC is deemed to have breached the market rules for not being able to perform its obligation in time-stamping, confirming receipt, and validating offer submissions within 5 minutes of receiving them (amidst other obligations stated in section 3.1 of this paper). Whether EMC notifies the MAU of a planned system outage, or an unplanned outage, the MSCP has the power under the market rules to mete out financial penalty or other enforcement actions, after investigating and making a determination on the breach. In particular,

section 7.2.8.5 of chapter 3<sup>5</sup> states that the MSCP may direct EMC to pay a financial penalty in accordance with section 7.2.11. However, the MSCP shall do so only if it is satisfied that the breach could have been avoided by the exercise of due diligence by EMC or that EMC had acted intentionally.

Since the MSCP is vested with the power, under the market rules, to investigate / determine and take enforcement actions for any rule breach – instead of creating exceptions to the market rules, e.g. to remove obligations for DCs to submit offer revisions during EMC's NEMS system outages which effectively remove EMC obligations to process submitted offers, the MSCP should continue to be the party to investigate and assess rule breaches arising from such outages. This will ensure that the unavailability of EMC's NEMS systems are duly-investigated and assessed by the MSCP, and will also prevent excessive scheduling of planned outages by EMC and/or excessive occurrence of unplanned outages.

#### **4 Consultation**

This paper was published for comments on 26 August 2010 – no comments were received.

#### **5 Recommendation**

Given that backup submission procedures are in place for DCs to submit offers during system outage at EMC, the proposer's suggestion for additional procedures in the market manual is not necessary. In addition, there is comfort that rule breaches by EMC will be governed by the MSCP (e.g. investigation and determination on rule breach, including the taking of enforcement action). This ensures that outages, planned or unplanned, will be kept to an acceptable level.

Thus, EMC recommend that the RCP do not support the proposal to make changes to the market rules and market manual for cases where a DC is obliged to submit offer revisions but the EMC's NEMS systems are unavailable.

#### **6 Decision by RCP**

At the 53<sup>rd</sup> RCP meeting, the panel unanimously decided that no changes be made to the market rules and market manual.

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<sup>5</sup> The MSCP may direct that the *market participant* or the *EMC* pay a financial penalty determined in accordance with section 7.2.11 within such time as may be specified in the direction, provided that the *market surveillance and compliance panel* shall not issue such a direction unless the *market surveillance and compliance panel* is satisfied that the breach could have been avoided by the exercise of due diligence by the *market participant* or the *EMC* or that the *market participant* or the *EMC* acted intentionally.