# Notice of Market Rules Modification

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| **Paper No.:** | EMC/RCP/25/2006/249 |
| **Rule reference:** | Chapters 2 and 7 |
| **Proposer:** | Jennise Ting, EMC |
| **Date received by EMC:** | 20 September 2005 |
| **Category allocated:** | 3 |
| **Status:** | Not adopted by Board |
| **Effective Date:** | N/A |

**Summary of proposed rule modification:**

The proposal to shorten the settlement cycle involves the following changes:

1. Remove the preliminary settlement run;
2. Produce the final settlement run on TD+6 business days;
3. Bring forward MPs' payment (to EMC) date to TD+9 business days;
4. Bring forward EMC's payment (to MPs) date to TD+10 business days; and
5. Reduce the amount of required credit support from 30 times to 25 times the estimated average daily exposure.

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| **Date considered by Rules Change Panel:** | 14 March 2006 |
| **Date considered by EMC Board:** | 30 March 2006 |
| **Date considered by Energy Market Authority:** | |

**Proposed rule modification:**

See attached paper.

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

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| PAPER NO. | : | **EMC/BD/02/2006/04(a)** |
| RCP PAPER NO. | : | **EMC/RCP/25/2006/249** |
| SUBJECT | : | **SHORTENING OF SETTLEMENT CYCLE** |
| FOR | : | **DECISION** |
| PREPARED BY | : | **POA TIONG SIAW**<br>**SENIOR ECONOMIST** |
| REVIEWED BY | : | **PAUL POH LEE KONG**<br>**SVP, MARKET ADMINISTRATION** |
| DATE | : | **30 MARCH 2006** |


**Executive Summary**

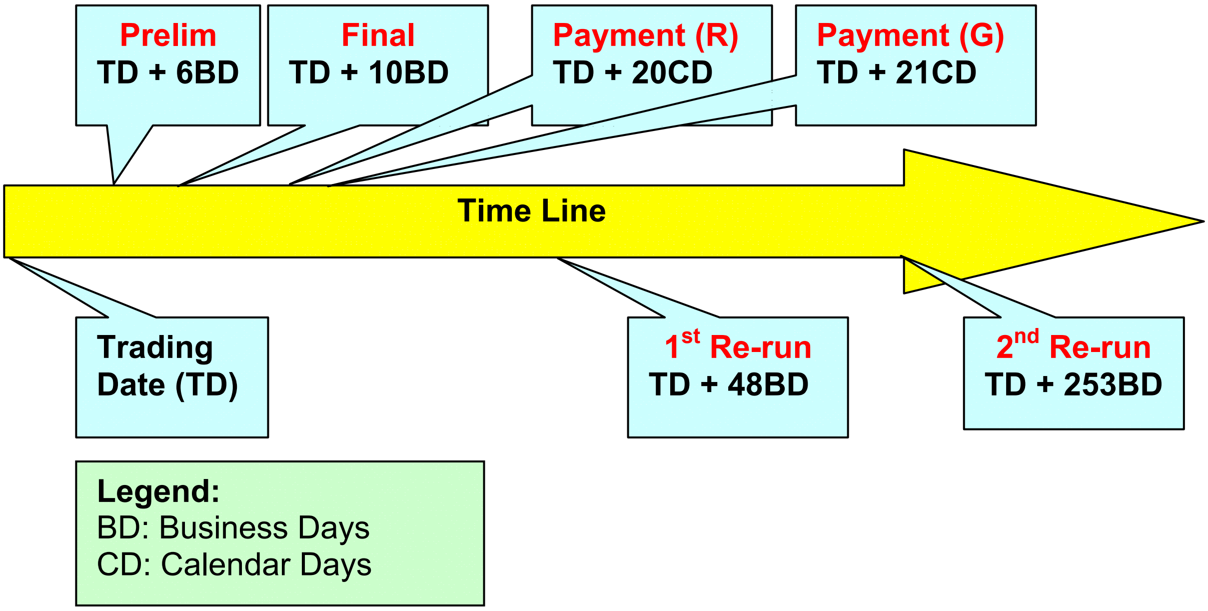
This paper considered the rule modification proposal to shorten the wholesale electricity market settlement cycle. It analyzed the potential benefits and costs of this change. Based on inputs from Market Participants, the total financial costs of implementing this change exceed the savings. The theoretical fact that interest savings (for retailers/MSSL) and interest costs (for generators) should be mutually offsetting was not reflected in the survey result. However, the RCP also noted that even if the figures were adjusted to reflect that offset, the net financial savings would still be insignificant. Given the presence of other non-quantifiable costs, the RCP could not establish clear efficiency gains from this change.

The Rules Change Panel recommends that the EMC Board **not adopt** the proposal.

## 1. Introduction

The NEMS has a daily settlement regime. For all transactions pertaining to a trading date (TD), EMC produces a preliminary settlement statement on TD+6 business days. The final settlement statement is produced on TD+10 business days. Invoicing is based on amounts in the final settlement statement. The current settlement cycle comprises TD+20 calendar days for a "buying" market participant (MP) to pay for its trade i.e. MP payment date, and TD+21 calendar days for a "selling" MP to receive payment for its trade i.e. EMC payment date.

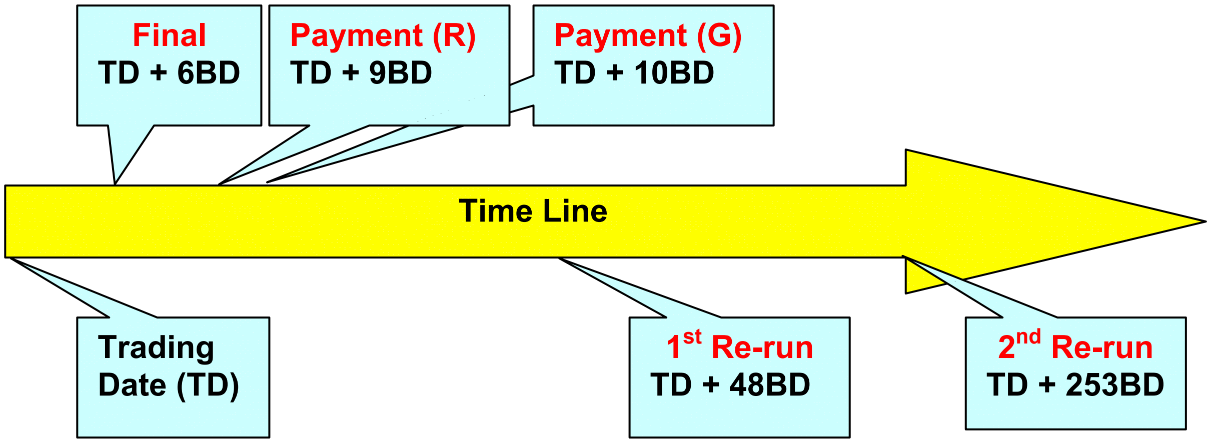
Additionally, two settlement re-runs are scheduled on TD+48 business days and TD+253 business days.




## 2. Proposal to Shorten Settlement Cycle

The proposal to shorten the settlement cycle involves the following changes:

6. Remove the preliminary settlement run;
7. Produce the final settlement run on TD+6 business days;
8. Bring forward MPs' payment (to EMC) date to TD+9 business days;
9. Bring forward EMC's payment (to MPs) date to TD+10 business days; and
10. Reduce the amount of required credit support from 30 times to 25 times the estimated average daily exposure.




## 3. Economic Analysis

### 3.1 Arguments for Shortening the Wholesale Settlement Cycle

#### 3.1.1 Closer payment date to trading date

Narrowing the gap between trade and settlement is in line with best practice for any type of commodity or financial exchange. The argument here is a qualitative but strong one because the financial risk of payment default is inevitably reduced. The following points are worth noting:

- The overall default risk of NEMS is reduced because the amount due for unpaid trades is permanently reduced by approximately the value of 5 days[1] of trade.
- The creditor class of MPs (generally generators) benefit from being paid earlier. This, however, should be offset by debtor MPs (generally retailers) having to pay out earlier.

#### 3.1.2 Savings from the elimination of Preliminary Settlement Run

There will be administrative/resource savings associated with the elimination of the preliminary settlement run. They could come in the form of manpower savings and system resource savings. These savings are applicable to all MPs and Service Providers.

#### 3.1.3 Reduction in credit support requirement

Each “buying” market participant (generally a retailer) is now required to provide credit support that is equivalent to 30 times its estimated average daily exposure (EADE). This amount is derived from the summation of the following two parts:

1. 20-calendar day payment cycle; and
2. 10-calendar day MP suspension process.

[1] The proposed MP payment date is approximately TD+15 calendar days, a 5-calendar day reduction from the existing MP payment date of TD+20 calendar days.

On any given trading day, the first part represents incurred debt owed by a MP for trades already executed. The second part represents the potential debt a MP, who defaults, could continue to incur until it is suspended from trading.

If the settlement cycle is shortened, a MP's payment date is brought forward to T+9 business days. This translates into a payment cycle of 15 calendar days (see Table 1). With the 10-calendar day MP suspension process unchanged, the required credit support can now be reduced to 25 times EADE. All else unchanged, this would mean a 16.7% reduction in the level of mandatory credit support. Hence, potential savings could come from reduced funding cost and reduced issuing cost of credit support.

**Table 1: Conversion of Business Days to Calendar Days**

| Scenarios: | 2 weekends (1 public holiday in between) | **2 weekends (2 public holidays in between)** | 2 weekends (3 public holidays in between) |
|---|---|---|---|
| 9 business days = | 14 calendar days | **15 calendar days** | 16 calendar days |

### 3.2 Arguments against Shortening the Wholesale Settlement Cycle

#### 3.2.1 Loss of "window period" between Preliminary and Final Settlement runs

With the present arrangement, there is a four business-day window period between the Preliminary and Final Settlement. During this period, any error discovered on the Preliminary Settlement Statement can be rectified and reflected in the Final Settlement Statement. The two tables below show the total monthly dollar adjustments made to the Preliminary Settlement Statement between April and August 2005.

**Table 2: Adjustment amounts made to Preliminary Settlement Statement Jan-Sep 2005**

| | **Range by individual Market Participant** |
|---|---|
| **Gross Adjustment** | **$53 to $143,058** |
| **As % of total net settlement amount** | **0.001% to 0.088%** |
| **Net Adjustment** | **$34 to $133,244** |
| **As % of total net settlement amount** | **0.000% to 0.063%** |

From January to September 2005, Table 1 shows that the maximum amount of monthly gross adjustments to the preliminary settlement statement is less than 0.09% of the settlement amount of a market participant.

### 3.2.2 Other Costs - Process/System Changes etc.

It is expected that system and process changes would be required, especially for the EMC and MSSL. A change in the wholesale settlement arrangement is also expected to have knock-on effects on retail and non-retail consumers. The latter are difficult to quantify.

## 3.3 Quantifying Financial Savings/Costs

At the 23rd RCP Meeting on 11 November 2005, the RCP requested EMC to obtain from all MPs the actual costs and savings that would result from shortening the settlement cycle.

The following table describes the types of savings and costs relevant to each class of Market Participant and service providers in our analysis:

**Table 3: Types of Savings and Costs**

| **SAVINGS** | **Gencos** | **Retailers** | **MSSL** | **EMC** |
|---|---|---|---|---|
| (a) Admin/Manpower due to elimination of one settlement run | **S** | **S** | **S** | **S** |
| (b) Reduction in Required Credit Support: | | | | |
| - (b.1) Funding Cost of Credit Support | n/a | **S** | **S** | n/a |
| - (b.2) Issuance Cost of Credit Support | n/a | **S** | **S** | n/a |
| (c) Interest savings from being paid earlier | **S** | n/a | n/a | n/a |
| **COSTS** | | | | |
| (d) System Costs | n/a | n/a | **C** | **C** |
| (e) Interest cost from having to pay earlier | n/a | **C** | **C** | n/a |

"S" denotes savings
"C" denotes costs

### 3.3.1 Inputs from MPs and Service Providers

The following table summarizes the inputs received from all MPs:

**Table 4: Summary of Annual Financial Savings/Costs**

| **SAVINGS** | **All Gencos** | **All Retailers** | **MSSL + EMC** |
|---|---|---|---|
| (a) Admin/Manpower due to elimination of one settlement run | **$20,000** | **$3,000** | **$80,000** |
| (b) Reduction in Required Credit Support: | | | |
| - (b.1) Funding Cost of Credit Support | n/a | **0** | **0** |
| - (b.2) Issuance Cost of Credit Support | n/a | **$43,137** | **$50,000** |
| (c) Interest savings from being paid earlier | **$1,575,808** | n/a | n/a |
| **Total Savings** | **$1,771,945** | | |
| **COSTS** | | | |
| (d) System Cost | n/a | n/a | **$163,000** |
| (e) Interest cost from having to pay earlier | n/a | **$925,826** | **$1,450,000** |
| **Total Costs** | **$2,538,826** | | |

Based on returns from MPs and service providers, the net financial impact is negative because the expected annual costs exceed expected annual savings by approximately **$0.77m**.

The RCP also noted that across the wholesale market, the total of item (c) and (e) should theoretically be mutually offsetting. This was not reflected in the survey result. Nevertheless, it also noted that even if they were, the net financial savings would have been insignificant.

### 3.4 Summary of Benefits and Costs

We compile a list of the pros and cons of shortening the settlement cycle in the table below:

| **BENEFITS** | **COSTS** |
|---|---|
| • Net financial savings of $1.8m per annum<br>• Overall market risk reduction due to lower amount of unpaid trades | • Net financial costs of $2.5m per annum<br>• Loss of “window period”<br>• Unconsidered impact of change on retail and non-retail consumers |

Based on the surveyed results, financial costs exceed financial benefits. If we assume that total interest cost and savings were mutually offsetting, the net financial savings would also be insignificant. While there is the benefit of lower market risk, there are also costs such as that of forgoing the 4-business day "window period", and potential costs associated with consumers that were not considered in the paper.

Hence, we cannot conclude that there would be net efficiency gain in implementing the proposed change.

## 4. Consultation

We have published the rule modification proposal on the EMC website for comments. The following comments were received.

**Response from MSSL:**

"The proposed rule change on the shortening of payment cycle will have significant impact on the metering, billing and settlement of the wholesale and retail markets. Our key concerns are as follows:

a) Currently, a preliminary statement is issued on T+ 6 business days and the final statement on T+9 business days. This allows Market Participants (MPs) 3 days to check and rectify metering errors before the final statement is issued. With the proposed elimination of the preliminary statement and the bringing forward of the final statement to T+6 business days, this window to correct metering errors is removed. MPs would have to wait till T+45 business days for the earliest possible settlement re-run. MPs would thus have to undergo a longer waiting period to have the affect metering data adjusted and the financials re-settled. Customers will consequently be affected as the bills will have to be corrected. From 1 Jan - 22 Sept 05, there were 42 incidents of metering data that were rectified during the current 3-day time window between the 6th and 9th business day.

**Response:**
Section 3.2.1 of this paper shows that the financial impact of these settlement adjustments has not been significant.

b) In accordance to the Market Support Services Code, MSSL issues invoices for a given billing period no later than 3 business days following final prices by EMC. In view of the forwarding of the final prices to T +6 BD, the billing cycle of retailers and consumers will correspondingly be advanced. This will lead to adverse reaction from retailers and consumers who now have to pay their bills earlier although the billing period remains the same.

**Response:**
Since retailers and consumers have received the service, they are obligated to pay. If they receive invoices earlier as a result of more efficient processing, it is only appropriate that they make payment earlier.

c) The shortening of payment cycle will require changes to our business processes and system settings e.g. billing cycle will be adjusted, giro payment dates etc. All these prior changes have to be preceded by UAT activities. This is to ensure there is no negative impact and disruption to our business operations as well as our service to consumers.

**Response:**
This comment is noted. EMC has asked MSSL to provide some high-level description of the changes required.

d) The proposal to shorten the payment cycle from T+20 calendar days to T+9 business days (approximately T+13 CD) will result in an increase of working capital and higher interest payments. This cost increase will have to be passed through to the market.

**Response:**
This response is noted. These costs have been estimated by market participants and provided in Section 3.3 of this paper.

e) The reduction of credit support is only 5 calendar days which is not consistent with the proposed advancing of payment days by 7 calendar days.

**Response:**
Section 3.1.3 explains the derivation of a 5-calendar day reduction in prudential requirement. Two public holidays has been factored into the derivation.

In conclusion, SP Services does not support this rule change proposal."

## 5. Conclusion and Recommendation

Based on inputs from Market Participants, the total financial costs of implementing this change exceed the savings. The theoretical fact that interest savings (for retailers/MSSL) and interest costs (for generators) should be mutually offsetting was not reflected in the survey result. However, the RCP also noted that even if the figures were adjusted to reflect that offset, the net financial savings would still be insignificant. Given the presence of other non-quantifiable costs, the RCP could not establish clear efficiency gains from this change.

The Rules Change Panel therefore recommends that the EMC Board **not adopt** the rule modification proposal to shorten the settlement cycle.