

<p>Rule modification title</p>	<p>Rules Modification for Corrigendum for Implementation of Automatic Penalty Scheme (APS)</p>
<p>Submitted By : Company: Date: Telephone No.</p>	<p>Market Administration Energy Market Company Pte Ltd 29 September 2015 6779 3000</p>
<p>Rules Version/Chapter/Section</p>	<p>Market Rules: Version approved by EMA on 1 December 2014/Chapter 5, Appendix 5D Market Manual: <ul style="list-style-type: none"> • Market Operations – Automatic Financial Penalty Scheme (Chapter 5 and Appendix 5D) (as approved by EMA on 1 December 2014) </p>
<p>Description of Market Rules</p>	<p>Please refer to Annexes 1 and 2.</p>
<p>Reasons for amendment</p>	<p>This rules modification is to give effect to “Corrigendum for Implementation of Automatic Penalty Scheme” issued by the EMA, which aims to correct an error in APS formulation. Please refer to Annex 3. In addition, the market manual is modified to allow EMC system to accept two file naming conventions so as to differentiate the original APS files and revised APS files received from PSO.</p>
<p>Impact of proposed amendment on MP, MO, PSO and general public</p>	<p>The original intent of the APS is to impose a financial penalty on generation registered facilities that deviate from their dispatch schedule by more than 10 MW. The revised formulation would correctly reflect this tolerance level of 10 MW.</p>
<p>EMC’s Comments</p>	<ul style="list-style-type: none"> • The proposed rules modification are made pursuant to the EMA’s directive made under Section 46(2)(b) of the Electricity Act. • EMA approved the rules modification on 5 October 2015. • The effective date is 17 November 2015.

Annex 1 Further Modifications to the Modifications to the Market Rules (as previously approved by EMA on 1 December 2014)

Rule Modifications previously approved by EMA on 1 December 2014 (as previously approved by EMA on 1 December 2014)	Further Proposed Rule Changes (Deletions represented by strikethrough text and additions represented by double underlined text)	Reasons for Rule Change
Appendix 5D – Automatic Financial Penalty Scheme for Deviation by Generation Registered Facility	Appendix 5D – Automatic Financial Penalty Scheme for Deviation by Generation Registered Facility	
<p>D.2 <u>DEFINITIONS & INTERPRETATION</u></p> <p>D.2.1 In this Appendix:</p> <p>...</p> <p>D.2.1.9 “BeginGeneration” refers to a <i>generation registered facility’s</i> gross generation output (in MW) at the start of a <i>dispatch period</i>, as recorded by the <i>PSO’s</i> Energy Management System for that <i>dispatch period</i>;</p> <p>D.2.1.10 “EndGeneration” refers to a <i>generation registered facility’s</i> gross generation output (in MW) at the end of a <i>dispatch period</i>, as recorded by the <i>PSO’s</i> Energy Management System for that <i>dispatch period</i>;</p> <p>D.2.1.11 “EndScheduledQty” refers to a <i>generation registered facility’s</i> scheduled energy quantities (in MW) for a <i>dispatch period</i>, as scheduled in the <i>real-time dispatch schedule</i> that is deemed to be <i>dispatch instructions</i> for that <i>dispatch period</i>, if such <i>real-time dispatch schedule</i> is released to the <i>dispatch coordinator</i> of the <i>generation registered facility</i> on time, in accordance with the</p>	<p>D.2 <u>DEFINITIONS & INTERPRETATION</u></p> <p>D.2.1 In this Appendix:</p> <p>...</p> <p>D.2.1.9 “BeginGeneration” refers to a <i>generation registered facility’s</i> gross generation output (in MW) at the start of a <i>dispatch period</i>, as recorded by the <i>PSO’s</i> Energy Management System for that <i>dispatch period</i>;</p> <p>D.2.1.109 “EndGeneration” refers to a <i>generation registered facility’s</i> gross generation output (in MW) at the end of a <i>dispatch period</i>, as recorded by the <i>PSO’s</i> Energy Management System for that <i>dispatch period</i>;</p> <p>D.2.1.1110 “EndScheduledQty” refers to a <i>generation registered facility’s</i> scheduled energy <u>quantities</u> <u>output</u> (in MW) for a <i>dispatch period</i>, as scheduled in the <i>real-time dispatch schedule</i> that is deemed to be <i>dispatch instructions</i> for that <i>dispatch period</i>, if such <i>real-time dispatch schedule</i> is released to the <i>dispatch coordinator</i> of the <i>generation registered facility</i> on time, in</p>	<p>To delete the definition of “BeginGeneration” as it is no longer required in the formulae in section D.3 of Appendix 5D.</p> <p>To re-number the succeeding sections with the deletion of the definition of “BeginGeneration”.</p> <p>To provide that EndScheduleQty refers to a generation</p>

Rule Modifications previously approved by EMA on 1 December 2014 (as previously approved by EMA on 1 December 2014)	Further Proposed Rule Changes (Deletions represented by strikethrough text and additions represented by double underlined text)	Reasons for Rule Change
<p><i>market operations timetable</i>, or, if such <i>real-time dispatch schedule</i> is not released on time as aforesaid, as scheduled in the <i>short-term schedule</i> that is issued as <i>dispatch instructions</i> for that <i>dispatch period</i>;</p> <p>D.2.1.12 “HEUC” refers to the hourly <i>energy</i> uplift charge which is to be determined as provided in section 3.5.2 of Chapter 7;</p> <p>D.2.1.13 “MEUC” refers to the monthly <i>energy</i> uplift charge which is to be estimated as provided in section 3.5.3 of Chapter 7;</p> <p>D.2.1.14 the use of superscript “m(a)” in respect of any value is a reference to the value for the <i>generation registered facility</i> located at <i>market network node m</i> and associated with <i>settlement account a</i>; and</p> <p>D.2.1.15 the use of subscript “h” in respect of any value is a reference to the value for a given <i>settlement interval h</i> or its corresponding <i>dispatch period h</i>, as the case may be.</p>	<p>accordance with the <i>market operations timetable</i>, or, if such <i>real-time dispatch schedule</i> is not released on time as aforesaid, as scheduled in the <i>short-term schedule</i> that is issued as <i>dispatch instructions</i> for that <i>dispatch period</i>;</p> <p>D.2.1.12<u>11</u> “HEUC” refers to the hourly <i>energy</i> uplift charge which is to be determined as provided in section 3.5.2 of Chapter 7;</p> <p>D.2.1.13<u>12</u> “MEUC” refers to the monthly <i>energy</i> uplift charge which is to be estimated as provided in section 3.5.3 of Chapter 7;</p> <p>D.2.1.14<u>13</u> the use of superscript “m(a)” in respect of any value is a reference to the value for the <i>generation registered facility</i> located at <i>market network node m</i> and associated with <i>settlement account a</i>; and</p> <p>D.2.1.15<u>14</u> the use of subscript “h” in respect of any value is a reference to the value for a given <i>settlement interval h</i> or its corresponding <i>dispatch period h</i>, as the case may be.</p>	<p>registered facility’s scheduled energy output, instead of scheduled energy quantities.</p>

Rule Modifications previously approved by EMA on 1 December 2014 (as previously approved by EMA on 1 December 2014)	Further Proposed Rule Changes (Deletions represented by strikethrough text and additions represented by double underlined text)	Reasons for Rule Change
<p>D.3 DEVIATIONS & CALCULATION OF FINANCIAL PENALTY</p> <p>D.3.1 For the purposes of section 3.7.3 of Chapter 5, a <i>generation registered facility</i> shall have deviated from its <i>real-time dispatch schedule</i> or its <i>short-term schedule</i> (as the case may be) that is deemed to be or issued as <i>dispatch instructions</i> for a given <i>dispatch period</i>, if its deviation is more than 5 MWh, as determined in accordance with the following formula:</p> $\left \frac{1}{2} \times (\text{BeginGeneration}_h^{m(a)} + \text{EndScheduledQty}_h^{m(a)}) \times \frac{1}{2} \text{ hour} - \frac{1}{2} \times (\text{BeginGeneration}_h^{m(a)} + \text{EndGeneration}_h^{m(a)}) \times \frac{1}{2} \text{ hour} \right > 5\text{MWh}$ <p>D.3.2 The <i>EMC</i> shall calculate the financial penalty to be imposed on a <i>market participant</i> in respect of each of its deviating <i>generation registered facilities</i> for a given <i>dispatch period</i> as follows:</p> $\text{financial penalty}_h^{m(a)} = \text{Max} \{ 2 \times (\text{USEP}_h + \text{HEUC}_h) \times [\left \left(\frac{1}{2} \times (\text{BeginGeneration}_h^{m(a)} + \text{EndScheduledQty}_h^{m(a)}) \times \frac{1}{2} \text{ hour} - \frac{1}{2} \times (\text{BeginGeneration}_h^{m(a)} + \text{EndGeneration}_h^{m(a)}) \times \frac{1}{2} \text{ hour} \right - 5 \text{ MWh}], \$5000 \}$	<p>D.3 DEVIATIONS & CALCULATION OF FINANCIAL PENALTY</p> <p>D.3.1 For the purposes of section 3.7.3 of Chapter 5, a <i>generation registered facility</i> shall have deviated from its <i>real-time dispatch schedule</i> or its <i>short-term schedule</i> (as the case may be) that is deemed to be or issued as <i>dispatch instructions</i> for a given <i>dispatch period</i>, if its deviation is more than 5 MWh<u>10 MW</u>, as determined in accordance with the following formula:</p> $\left \frac{1}{2} \times (\text{BeginGeneration}_h^{m(a)} + \text{EndScheduledQty}_h^{m(a)}) \times \frac{1}{2} \text{ hour} - \frac{1}{2} \times (\text{BeginGeneration}_h^{m(a)} + \text{EndGeneration}_h^{m(a)}) \times \frac{1}{2} \text{ hour} \right > 5\text{MWh}$ $\frac{\frac{1}{2} \times \left \text{EndScheduledQty}_h^{m(a)} - \text{EndGeneration}_h^{m(a)} \right \times \frac{1}{2} \text{ hour}}{\text{EndGeneration}_h^{m(a)}} > 2.5\text{MWh}$ <p>D.3.2 The <i>EMC</i> shall calculate the financial penalty to be imposed on a <i>market participant</i> in respect of each of its deviating <i>generation registered facilities</i> for a given <i>dispatch period</i> as follows:</p> $\text{financial penalty}_h^{m(a)} = \text{Max} \{ 2 \times (\text{USEP}_h + \text{HEUC}_h) \times [\left \left(\frac{1}{2} \times (\text{BeginGeneration}_h^{m(a)} + \text{EndScheduledQty}_h^{m(a)}) \times \frac{1}{2} \text{ hour} - \frac{1}{2} \times (\text{BeginGeneration}_h^{m(a)} + \text{EndGeneration}_h^{m(a)}) \times \frac{1}{2} \text{ hour} \right - 5 \text{ MWh}], \$5000 \}$	<p>To correct an error in the formula used for determining whether a generation registered facility should be regarded as having deviated from its real time dispatch schedule/short-term schedule (that is deemed to be or issued as dispatch instructions), for the purposes of section 3.7.3 of Chapter 5.</p> <p>To correct errors in the formula used to calculate the financial penalty to be</p>

Rule Modifications previously approved by EMA on 1 December 2014 (as previously approved by EMA on 1 December 2014)	Further Proposed Rule Changes (Deletions represented by strikethrough text and additions represented by double underlined text)	Reasons for Rule Change																								
	$\text{financial penalty}_h^{m(a)} = \text{Max} \{ 2 \times (\text{USEP}_h + \text{HEUC}_h) \times \frac{[\frac{1}{2} \times \text{EndScheduledQty}_h^{m(a)} - \text{EndGeneration}_h^{m(a)}]}{\text{EndGeneration}_h^{m(a)}} \times \frac{1}{2} \text{ hour} - 2.5 \text{ MWh}], \$5000 \}$	imposed on a market participant in respect of each of its deviating generation registered facilities for a given dispatch period.																								
<p>D.4 <u>CALCULATION & COLLECTION OF FINANCIAL PENALTY</u></p> <p>D.4.1 The procedure and timelines for calculation of financial penalties, submission of notices of error, verification and imposition of financial penalties, on the <i>market participants</i> of the deviating <i>generation registered facilities</i>, are set out in the following table:</p> <table border="1" data-bbox="190 1046 1001 1369"> <thead> <tr> <th>Day</th> <th>Time of Day</th> <th>Event</th> <th>Provided By</th> <th>Provided To</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>By T+4</td> <td>By 17:00</td> <td>The <i>PSO</i> to submit the following data to the <i>EMC</i>:</td> <td><i>PSO</i></td> <td><i>EMC</i></td> <td>Once per <i>business day</i></td> </tr> </tbody> </table>	Day	Time of Day	Event	Provided By	Provided To	Frequency	By T+4	By 17:00	The <i>PSO</i> to submit the following data to the <i>EMC</i> :	<i>PSO</i>	<i>EMC</i>	Once per <i>business day</i>	<p>D.4 <u>CALCULATION & COLLECTION OF FINANCIAL PENALTY</u></p> <p>D.4.1 The procedure and timelines for calculation of financial penalties, submission of notices of error, verification and imposition of financial penalties, on the <i>market participants</i> of the deviating <i>generation registered facilities</i>, are set out in the following table:</p> <table border="1" data-bbox="1032 1046 1830 1369"> <thead> <tr> <th>Day</th> <th>Time of Day</th> <th>Event</th> <th>Provided By</th> <th>Provided To</th> <th>Frequency</th> </tr> </thead> <tbody> <tr> <td>By T+4</td> <td>By 17:00</td> <td>The <i>PSO</i> to submit the following data to the <i>EMC</i>:</td> <td><i>PSO</i></td> <td><i>EMC</i></td> <td>Once per <i>business day</i></td> </tr> </tbody> </table>	Day	Time of Day	Event	Provided By	Provided To	Frequency	By T+4	By 17:00	The <i>PSO</i> to submit the following data to the <i>EMC</i> :	<i>PSO</i>	<i>EMC</i>	Once per <i>business day</i>	To remove “BeginGeneration” from the data required to be provided by the
Day	Time of Day	Event	Provided By	Provided To	Frequency																					
By T+4	By 17:00	The <i>PSO</i> to submit the following data to the <i>EMC</i> :	<i>PSO</i>	<i>EMC</i>	Once per <i>business day</i>																					
Day	Time of Day	Event	Provided By	Provided To	Frequency																					
By T+4	By 17:00	The <i>PSO</i> to submit the following data to the <i>EMC</i> :	<i>PSO</i>	<i>EMC</i>	Once per <i>business day</i>																					

Rule Modifications previously approved by EMA on 1 December 2014 (as previously approved by EMA on 1 December 2014)					Further Proposed Rule Changes (Deletions represented by strikethrough text and additions represented by double underlined text)					Reasons for Rule Change
		(a) identification of all deviating <i>generation registered facilities</i> for each <i>dispatch period</i> for <i>trading day T</i> ; and					(a) identification of all deviating <i>generation registered facilities</i> for each <i>dispatch period</i> for <i>trading day T</i> ; and			PSO to the EMC, as stated in the table setting out the procedure and timelines for calculation of financial penalties, submissions of notices of error, verification and imposition of financial penalties on market participants of the deviating generation registered facilities (the " Table ").
		(b) BeginGeneration, EndScheduledQty and EndGeneration for each such deviating <i>generation registered facility</i> identified in (a) for each <i>dispatch period</i> for <i>trading day</i>					(b) BeginGeneration, EndScheduledQty and EndGeneration for each such deviating <i>generation registered facility</i> identified in (a) for each <i>dispatch period</i> for <i>trading day</i>			

Rule Modifications previously approved by EMA on 1 December 2014 (as previously approved by EMA on 1 December 2014)						Further Proposed Rule Changes (Deletions represented by strikethrough text and additions represented by double underlined text)						Reasons for Rule Change
		T.						T.				
By T+ 4	By 20:00	The <i>EMC</i> to release the following data (if such data has been received from the <i>PSO</i>) to each <i>market participant</i> with one or more deviating <i>generation registered facilities</i> :	<i>EMC</i>	<i>Market participant</i> with one or more deviating <i>generation registered facilities</i>	Once per <i>business day</i>	By T+ 4	By 20:00	The <i>EMC</i> to release the following data (if such data has been received from the <i>PSO</i>) to each <i>market participant</i> with one or more deviating <i>generation registered facilities</i> :	<i>EMC</i>	<i>Market participant</i> with one or more deviating <i>generation registered facilities</i>	Once per <i>business day</i>	To remove “BeginGeneration” from the data required to be provided by the EMC to a market participant with one or more deviating generation registered facilities, as stated in the Table.
		(a) identification of the deviating <i>generation registered facilities</i> for each <i>dispatch period</i> for <i>trading day</i>						(a) identification of the deviating <i>generation registered facilities</i> for each <i>dispatch period</i> for <i>trading day</i>				

Rule Modifications previously approved by EMA on 1 December 2014 (as previously approved by EMA on 1 December 2014)						Further Proposed Rule Changes (Deletions represented by strikethrough text and additions represented by double underlined text)						Reasons for Rule Change
		T; and (b) BeginG eneration, EndSchedul edQty and EndGenerat ion for each such deviating <i>generation registered facility</i> identified in (a) for each <i>dispatch period</i> for <i>trading day</i> T.						T; and (b) BeginG eneration; <u>eneration</u> , EndSchedul edQty and EndGenerat ion for each such deviating <i>generation registered facility</i> identified in (a) for each <i>dispatch period</i> for <i>trading day</i> T.				

Annex 2
Further Modifications to Market Operations Market Manual - Automatic Financial Penalty
Scheme (as approved by EMA on 1 December 2014)

(Deletions represented by strikethrough text and additions represented by
double underlined text)

MARKET OPERATIONS MARKET MANUAL

AUTOMATIC FINANCIAL PENALTY SCHEME (Chapter 5 & Appendix 5D)

DATE

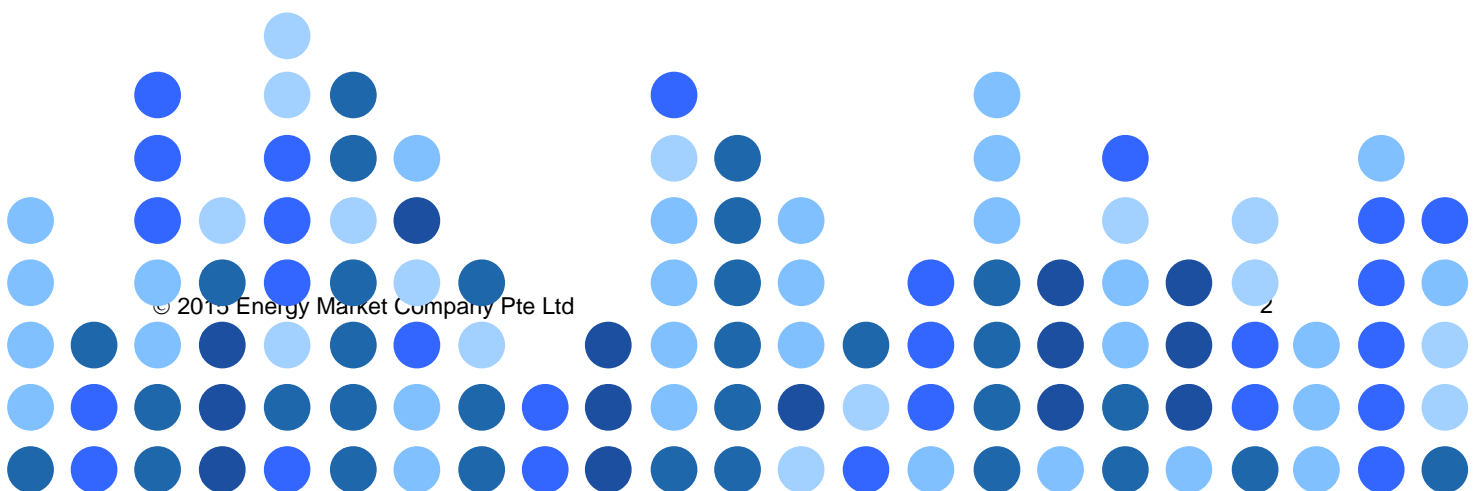


Table of Contents

1	Definitions	4
2	Automatic financial penalty scheme information file	5
2.1	PSO to submit automatic financial penalty scheme information file to EMC	5
2.2	Deadline for submission of automatic financial penalty scheme information file by the PSO to EMC	5
2.3	Format of automatic financial penalty scheme information file	5
3	Communication of automatic financial penalty scheme information	11
4	Financial penalty statements	13
4.1	Deadline for issuing preliminary and final financial penalty statements.....	13
4.2	Method of issuing preliminary and final financial penalty statements	13
4.3	Failure to receive preliminary and/or final financial penalty statement	13
5	Invoices	14
5.1	Issuance of invoices	14
5.2	Method of issuing invoices	14
5.3	Failure to receive invoice	14
6	Notice of error - Confirmation and determination of notice of error	15
7	Electronic funds transfer for automatic financial penalty scheme	16
7.1	Direct debit against market participant bank account.....	16
8	EMC Market Operations personnel contact details	17

1 Definitions

All terms in italics used in this *market manual* shall have the same meaning as ascribed to them under the *market rules*. Other non-italicised terms used in this *market manual* which have been defined in Appendix 5D of the *market rules* shall have the same meaning as therein ascribed to them.

2 Automatic financial penalty scheme information file

2.1 PSO to submit automatic financial penalty scheme information file to EMC

The *PSO* shall submit to the *EMC* the automatic financial penalty scheme information file for all deviating *generation registered facilities* for each given *trading day*, containing all data required in Appendix 5D of the *market rules* through such means as may be specified in this *market manual* or otherwise as may be mutually acceptable to the *PSO* and the *EMC*.

2.2 Deadline for submission of automatic financial penalty scheme information file by the PSO to EMC

The *PSO* shall submit each automatic financial penalty scheme information file for each given *trading day* to the *EMC* no later than 17:00, on the fourth *business day* after that given *trading day*.

2.3 Format of automatic financial penalty scheme information file

The automatic financial penalty scheme information file for each given *trading day* shall commence with a record specifying the filename which shall include the date and time at which the automatic financial penalty scheme information file is sent.

The format of ~~the each~~ automatic financial penalty scheme information file shall be as described in Tables 1 to 4 below.

Each automatic financial penalty scheme information file shall be terminated by an end-of-file record. The format of this end-of-file record shall be as described in Table 4 below.

[Table 1]

Data Item	Data Type and Length	Values / Data Format	Data Description
Record Type	Text(4)	"FNAM"	Identifies this record format
Filename	Text(22)	Either APSIYYYYMMDDHHMM SS.txt or APSNYYYYMMDDHHM MSS.txt	Identifies the <u>acceptable filenames of the automatic financial penalty scheme information file</u> , which shall include the year, month, date, hour (in 24 hour format), minute and seconds at which that the automatic financial penalty scheme information <u>such file is sent</u> ¹ .

Data Item	Data Type and Length	Values / Data Format	Data Description
Record Type	Text(4)	"DATE"	Identifies this record format
Date	Text(8)	YYYYMMDD	Specifies the <i>trading day</i> the data in the automatic financial penalty scheme information file relates to.

[Table 2]

Data Item	Data Type and Length	Values / Data Format	Data Description
Record Type	Text(4)	"HEAD"	Identifies this record format
Column Heading of the Corresponding Information File Data (this field is repeated as required)	Text(n)	Text values as indicated in Table 3	Describes the column heading of the corresponding information file data in the subsequent data record type, the field width should equal that of the corresponding information file data column.

¹ Either of these filename formats may be used by the PSO. The EMC will use the data contained in the most recent file received from the PSO.

[Table 3]

Data Item (Column Heading)	Data Type and Length	Values / Data Format	Data Description
HEAD	Text(4)	"APSI"	Identifies this record type
PD	Numeric(2)	1-48	Specifies the relevant <i>dispatch period</i> .
HH:MM HH:MM	Text(11)	HH:MM-HH:MM	Specifies the start and end times <u>(in 24 hour format)</u> for the relevant <i>dispatch period</i> .

Data Item (Column Heading)	Data Type and Length	Values / Data Format	Data Description
B1	Text(8)	The text value of B1 as specified in the <i>generation registered facility's</i> standing capacity data for that given <i>trading day</i>	Uniquely identifies the B1 : B2 : B3 of a <i>generation registered facility</i>
B2	Text(8)	The text value of B2 as specified in the <i>generation registered facility's</i> standing capacity data for that given <i>trading day</i>	
B3	Text(8)	The text value of B3 as specified in the <i>generation registered facility's</i> standing capacity data for that given <i>trading day</i>	
BegAct	Numeric	Any numeric value (expressed up to two decimal places)	Specifies the <i>generation registered facility's</i> gross generation output (in MW) at the start of the given <i>dispatch period</i> as recorded by <i>PSO's</i> Energy Management System for that <i>dispatch period</i> . It refers to <i>BeginGeneration</i> as specified in section D.2.1.9 of Appendix 5D of the <i>market rules</i> .

Data Item (Column Heading)	Data Type and Length	Values / Data Format	Data Description
EndSch	Numeric	Any numeric value (expressed up to <u>two decimal places</u>)	Specifies the <i>generation registered facility's</i> scheduled energy quantities output (in MW) for the given <i>dispatch period</i> , as scheduled in the <i>real-time dispatch schedule</i> that is deemed to be <i>dispatch instructions</i> for that <i>dispatch period</i> , if such <i>real-time dispatch schedule</i> is released to the <i>dispatch coordinator</i> of the <i>generation registered facility</i> on time, in accordance with the <i>market operations timetable</i> , or, if such <i>real-time dispatch schedule</i> is not released on time as aforesaid, as scheduled in the <i>short-term schedule</i> that is issued as <i>dispatch instructions</i> for that <i>dispatch period</i> . It refers to EndScheduledQty as specified in section D.2.1.44 <u>10</u> of Appendix 5D of the <i>market rules</i> .
EndAct	Numeric	Any numeric value (expressed up to two decimal places)	Specifies the <i>generation registered facility's</i> gross generation output (in MW) at the end of the given <i>dispatch period</i> as recorded by <i>PSO's</i> Energy Management System for that <i>dispatch period</i> . It refers to EndGeneration as specified in section D.2.1.40 <u>9</u> of Appendix 5D of the <i>market rules</i> .

[Table 4]

Data Item	Data Type and Length	Values / Data Format	Data Description
Record Type	Text(3)	"EOF"	Identifies this record format

If any of the automatic financial penalty scheme information file data required to be included in the automatic financial penalty scheme information file is missing or does not match its values or data format specified, the automatic financial penalty scheme information file will be rejected.

As an ~~example~~s, the automatic financial penalty scheme information file will appear in the form of one of the examples ~~as~~ shown below:

Example 1

FNAM APSI20130426145540.txt

DATE 20130422

HEAD	PD	HH:MM HH:MM	B1	B2	B3	BeginAct	EndSch	EndAct
APSI	1	00:00-00:30	ABC	DEF	GHI	45.56	85.00	46.09
APSI	2	00:30-01:00	ABC	DEF	GHI	46.09	85.00	46.09
APSI	3	01:00-01:30	ABC	DEF	GHI	46.09	85.00	46.57
EOF								

Example 2

FNAM APSN20130426162015.txt

DATE 20130422

<u>HEAD</u>	<u>PD</u>	<u>HH:MM HH:MM</u>	<u>B1</u>	<u>B2</u>	<u>B3</u>	<u>EndSch</u>	<u>EndAct</u>
<u>APSI</u>	<u>1</u>	<u>00:00-00:30</u>	<u>ABC</u>	<u>DEF</u>	<u>GHI</u>	<u>85.00</u>	<u>46.09</u>
<u>APSI</u>	<u>2</u>	<u>00:30-01:00</u>	<u>ABC</u>	<u>DEF</u>	<u>GHI</u>	<u>85.00</u>	<u>46.09</u>
<u>APSI</u>	<u>3</u>	<u>01:00-01:30</u>	<u>ABC</u>	<u>DEF</u>	<u>GHI</u>	<u>85.00</u>	<u>46.57</u>
<u>EOF</u>							

3 Communication of automatic financial penalty scheme information

Unless otherwise specified elsewhere in this *market manual*, all communications between *market participants*, the *PSO* and the *EMC* relating to the automatic financial penalty scheme information required to be communicated or provided under section D.4 of Appendix 5D of the *market rules* and this *market manual* shall be made through the *EMC* website at www.emcsg.com. The *PSO* or the *market participant* with one or more deviating *generation registered facilities* will have to log-in to submit, release or retrieve all information relating to the automatic financial penalty scheme. In any event that the *EMC* website is not available to communicate the automatic financial penalty scheme information, such communication will be made via other means as the *EMC* may approve or prescribe.

No	Type of activities	From	To
1	Submission of -automatic financial penalty scheme information file for a given <i>trading day T</i>	<i>PSO</i>	<i>EMC</i>
2	Release of automatic financial penalty scheme information data for each deviating <i>generation registered facility</i> for a given <i>trading day T</i>	<i>EMC</i>	A <i>market participant</i> with one or more deviating <i>generation registered facilities</i>
3	Release of preliminary financial penalty statement	<i>EMC</i>	A <i>market participant</i> with one or more deviating <i>generation registered facilities</i>
4	Submission of notice of error on preliminary financial penalty statement	A <i>market participant</i> to which the preliminary financial penalty statement is issued	<i>EMC</i>
5	Acknowledgement receipt of notice of error	<i>EMC</i>	A <i>market participant</i> which submitted the notice of error

6	If the notice of error raised pertains to data accuracy which is provided by the <i>PSO</i> for the purposes of the <i>EMC</i> issuing the preliminary financial penalty statement, the <i>EMC</i> is to submit request to the <i>PSO</i> and give a copy to the <i>market participant</i> for confirmation of the accuracy of such data from the <i>PSO</i>	<i>EMC</i>	<i>PSO</i> <i>A market participant</i> which submitted the notice of error
7	The <i>PSO</i> to <u>either</u> submit confirmation that <u>the data was accurate, or submit confirmation that either</u> the data was inaccurate and revert with accurate data <u>by submitting an automatic financial penalty scheme information file, or that the data was accurate</u> , in relation to any data referred to in the aforesaid notice of error to the <i>EMC</i> .	<i>PSO</i>	<i>EMC</i>
8	If the notice of error raised pertains to data, calculations or other information produced by the <i>EMC</i> , the <i>EMC</i> to determine either that the data, calculations or other information was inaccurate and make the appropriate correction(s) to such errors or that the data, calculations or other information was accurate.	<i>EMC</i>	<i>A market participant</i> which submitted the notice of error
9	Release of determination of the notice of error and copy to the <i>PSO</i> if it pertains to the <i>PSO</i> 's data confirmation	<i>EMC</i>	<i>A market participant</i> which submitted the notice of error <i>PSO</i> (where required)
10	Release of final financial penalty statement	<i>EMC</i>	<i>A market participant</i> with one or more deviating <i>generation registered facilities</i>

4 Financial penalty statements

4.1 Deadline for issuing preliminary and final financial penalty statements

The *EMC* shall issue a preliminary financial penalty statement for a given *trading day T* by 20:00 of the sixth *business day* after a given *trading day T* and the final financial penalty statement by 20:00 of the tenth *business day* after a given *trading day T*, in accordance with Appendix 5D of the *market rules*.

4.2 Method of issuing preliminary and final financial penalty statements

Preliminary financial penalty statements and final financial penalty statements will be released through the *EMC* website at www.emcsg.com where each *market participant* will only be able to access its own information by logging in to the *EMC* website.

4.3 Failure to receive preliminary and/or final financial penalty statement

In the event that a *market participant* with one or more deviating *generation registered facilities* does not receive the preliminary financial penalty statement or final financial penalty statement by its respective stipulated deadline set out under section 4.1 of this *market manual*, the *market participant* shall notify the *EMC* Market Operations personnel via email addressed to marketoperations@emcsg.com and also contact the *EMC* Market Operations personnel via telephone in respect of the same.

Upon receiving e-mail and telephone notification from the relevant *market participant*, the *EMC* Market Operations personnel shall, as soon as practicable, re-release the relevant financial penalty statements through the *EMC* website at www.emcsg.com and inform the affected *market participant* accordingly.

5 Invoices

5.1 Issuance of invoices

The *EMC* may issue to the *market participants* with one or more deviating *generation registered facilities*, invoices for final financial penalty statements on the tenth *business day* after a given *trading day T*.

Invoice: *Trading day T + 10 business days, 20:00*

5.2 Method of issuing invoices

The invoice will be made available through the *EMC* website at www.emcsg.com where each *market participant* with one or more deviating *generation registered facilities* will have to log-in to retrieve such invoice. In any event that the *EMC* website is not available, the invoice will be provided via other means as the *EMC* may approve or prescribe.

5.3 Failure to receive invoice

In the event that the *market participant* with one or more deviating *generation registered facilities* does not receive an invoice by the stipulated deadline set out under section 5.1 of this *market manual*, such *market participant* shall notify the *EMC* Market Operations personnel via email addressed to marketoperations@emcsg.com and also contact the *EMC* Market Operations personnel via telephone in respect of the same.

Upon receiving e-mail and telephone notification from the relevant *market participant*, the *EMC* Market Operations personnel shall re-release the invoice through the *EMC* website at www.emcsg.com and inform the affected *market participant* accordingly.

6 Notice of error - Confirmation and determination of notice of error

The timelines for submission of the notice of error, confirmation and determination on the *market participants* of the deviating *generation registered facilities*, are set out in the following table:

Day	Time of Day	Event	Provided By	Provided To
By trading day T + 7 business days	By 17:00	A <i>market participant</i> with one or more deviating <i>generation registered facilities</i> to submit a notice of error to the <i>EMC</i> if it is of the view that there is an error with any item and/or calculation in any preliminary financial penalty statement issued to it for a given <i>trading day T</i> .	<i>Market participant</i> to which the preliminary financial penalty statement is issued	<i>EMC</i>
By trading day T + 7 business days	By 20:00	<i>EMC</i> to send a request for confirmation of the accuracy of the automatic financial penalty information data which a <i>market participant</i> has indicated to be erroneous in the notice of error and where such data is provided by <i>PSO</i> .	<i>EMC</i>	<i>PSO</i> (with copy to <i>market participant</i> which submitted the duly submitted notice of error)
By trading day T + 9 business days	By 17:00	The <i>PSO</i> to send confirmation on whether <u>that</u> the data contained in the notice of error was accurate, or send confirmation that <u>the</u> data contained in the notice of error was inaccurate and provide the correct data to the <i>EMC</i> <u>by submitting an automatic financial penalty scheme information file</u> .	<i>PSO</i>	<i>EMC</i>
By trading day T + 9 business days	By 20:00	The <i>EMC</i> to release the determination of the aforesaid notice of error.	<i>EMC</i>	<i>Market participant</i> which submitted the duly submitted notice of error (with copy to <i>PSO</i>)

7 Electronic funds transfer for automatic financial penalty scheme

7.1 Direct debit against market participant bank account

The *market participant* shall pay all financial penalties stated in its final financial penalty statement for a given *trading day T*, by 17:00 on the twentieth day after *trading day T* (subject to *business day convention*).

The *EMC* shall be entitled to instruct the relevant bank or financial institution (at which that *market participant's market participant bank account* is maintained) to debit such *market participant bank account* on the twentieth day after *trading day T* (subject to *business day convention*) for the full amounts of all financial penalties stated in the *market participant's* final financial penalty statement for *trading day T*.

Such instructions shall be issued by the *EMC* by the eleventh *business day* after *trading day T*.

That *market participant* shall ensure that the *EMC* shall at all times be duly authorized to issue such instructions to that relevant bank or financial institution in respect of that *market participant's market participant bank account*.

That *market participant* shall ensure that there shall at all times be sufficient available free balance funds in its *market participant bank account* to pay in full any and all financial penalties stated in its final financial penalty statements when they become due.

8 EMC Market Operations personnel contact details

Contact:	Market Operations Personnel
Address:	Market Operations Energy Market Company 238A Thomson Road #11-01 Novena Square Tower A Singapore 307684
Telephone:	+65 6779 3000
Facsimile:	+65 6779 3030
Website:	www.emcsg.com
E-mail Address:	marketoperations@emcsg.com

For any enquiries on this *market manual*, please e-mail the *EMC* Market Operations personnel using the e-mail address provided above.

Annex 3
Corrigendum for Implementation of Automatic Penalty Scheme

Issued by EMA on 15 July 2015



**CORRIGENDUM FOR IMPLEMENTATION OF
AUTOMATIC PENALTY SCHEME**

15 JULY 2015 | ENERGY MARKET AUTHORITY
991G Alexandra Road
#02-29 Singapore 119975
www.ema.gov.sg

Disclaimer:

The information contained in this document is subject to change and shall not be treated as constituting any advice to any person. It does not in any way bind the Energy Market Authority (“EMA”) to grant any approval or official permission for any matter, including but not limited to the grant of any exemption nor to the terms of any exemption. EMA reserves the right to change its policies and/or to amend any information contained in this document without prior notice. Persons who may be in doubt about how the information in this document may affect them or their commercial activities are advised to seek independent legal advice or any other professional advice as they may deem appropriate. EMA shall not be responsible or liable for any consequences (financial or otherwise) or any damage or loss suffered, directly or indirectly, by any person resulting or arising from the use of or reliance on any information contained in this document.

Background

1. In consultation with the industry, EMA developed the Automatic Penalty Scheme (“APS”) to incentivise each Generation Registered Facility (“GRF”) to comply with its dispatch schedule. The formulation of the APS is given in EMA’s Decision Paper dated 27 Apr 2011 (refer to the **Appendix**).

2. The intent of the APS is to impose a financial penalty on any GRF that deviates from its dispatch schedule by more than 10 MW for each half hour dispatch period. The electricity Market Rules to implement the APS was approved by EMA and published by EMC in August 2014. EMC is in the process of modifying its IT system to implement the APS in accordance with the approved Market Rules. The relevant Market Rules will only come into effect after EMC has completed the required modifications to its IT system.

Corrigendum

3. The following are the formulas (set out in Appendix 5D of Chapter 5 of the Market Rules) to calculate (a) the extent of deviation by a GRF from its dispatch schedule for each half hour period, and (b) the financial penalty to be imposed on the GRF for any deviation beyond the 10 MW tolerance level:

Section D.3.1:

$$\left| \frac{1}{2} \times (\text{BeginGeneration} + \text{EndScheduledQty}) \times \frac{1}{2} \text{ hour} - \frac{1}{2} \times (\text{BeginGeneration} + \text{EndGeneration}) \times \frac{1}{2} \text{ hour} \right| > 5 \text{ MWh}$$

Section D.3.2:

Financial Penalty

$$= \text{Max} \{ 2 \times (\text{USEP} + \text{HEUC}) \times [\left| \frac{1}{2} \times (\text{BeginGeneration} + \text{EndScheduledQty}) \times \frac{1}{2} \text{ hour} - \frac{1}{2} \times (\text{BeginGeneration} + \text{EndGeneration}) \times \frac{1}{2} \text{ hour} \right| - 5 \text{ MWh}], \$5000 \}$$

4. EMA has reviewed the above formulas and discovered that the 10 MW tolerance level translates to an output tolerance threshold of 2.5 MWh (instead of 5 MWh as assumed in the current formulation) for each half hour period. This is on the consideration that the amount of output deviation is intended to be based on the average of the two reference output (MW) capacities, specifically at the beginning and end of the half hour period. Furthermore, the “BeginGeneration” parameter appearing twice in each formula cancels out and hence the formulas can be simplified as shown below:

Section D.3.1:

$$\frac{1}{2} \times | \text{EndScheduledQty} - \text{EndGeneration} | \times \frac{1}{2} \text{ hour} > \mathbf{2.5 \text{ MWh}}$$

Section D.3.2:

Financial Penalty

$$= \text{Max} \{ 2 \times (\text{USEP} + \text{HEUC}) \times \\ [\frac{1}{2} \times | \text{EndScheduledQty} - \text{EndGeneration} | \times \frac{1}{2} \text{ hour} - \\ \mathbf{2.5 \text{ MWh}}], \$5000 \}$$

5. Accordingly, EMA has requested EMC to make consequential changes to the the Market Rules and relevant Market Manuals to incorporate the above.

Implementation Timeline

6. EMC is expected to complete IT modifications to effect the APS and also the Minimum Stable Load Compensation (“MSLC”) by end 2015. EMC will update the industry on the start date for both schemes in due course.