

The background of the lower half of the page is a photograph of a wind farm and power lines, overlaid with a semi-transparent blue filter. On the left, several white wind turbines are visible, with their blades extending outwards. On the right, a tall, lattice-structured power transmission tower stands prominently. The overall scene is set against a clear sky.

Independent Market Operator

Procedure Change Report

**Title: Amendments to the Market
Procedure for Reserve
Capacity Testing**

Ref: PC_2009_10

Date: 24 May 2010

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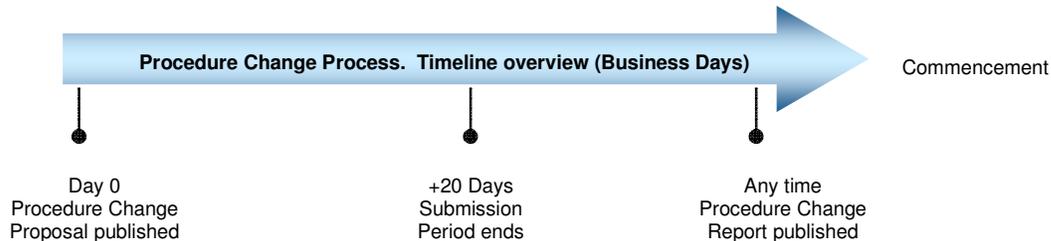
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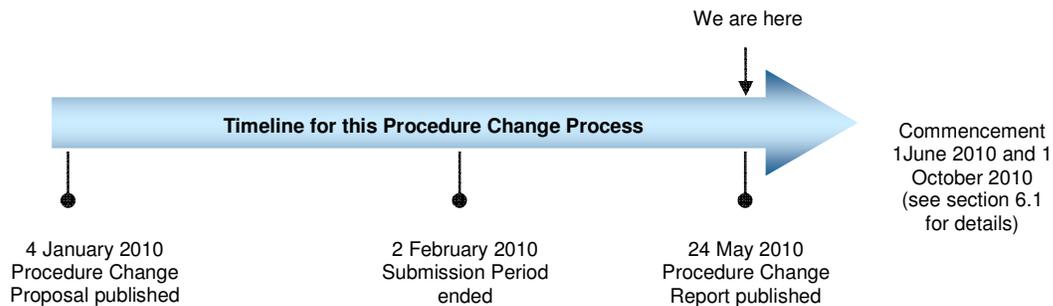


1. INTRODUCTION

On 4 January 2010, the Independent Market Operator (IMO) published a Procedure Change Proposal to amend the Market Procedure for Reserve Capacity Testing. The proposal has been processed according to the Procedure Change Process under clause 2.10 of the Wholesale Electricity Market Rules (Market Rules). This process adheres to the following timelines:



The key dates in processing this Procedure Change Proposal are:



This Procedure Change Report is published by the IMO in accordance with clause 2.10.12 of the Market Rules.

2. THE PROCEDURE CHANGE PROPOSAL

2.1 Details of the Proposal

Each year, the Independent Market Operator (IMO) is required to verify and test the operation of Facilities holding Capacity Credits to ensure that the Reserve Capacity Obligations of Market Participants are met.

The IMO noted that the proposed amendments to the Market Procedure for Reserve Capacity Testing will improve the process followed by the IMO when testing a Facility's ability to meet its Reserve Capacity Obligations. In particular the proposed amendments:

- define testing cycles and Temperature Dependence Curves (step 1.2);
- define how passes and fails of Reserve Capacity Tests are determined using the Temperature Dependence curve (step 1.7.4 -1.7.6); and



- detail how the IMO measures temperature (step 1.8.2 -1.8.3).

To improve the integrity of the Market Procedure, the IMO also proposed:

- a number of minor and typographical amendments; and
- to include details relating to the Amending Rules and associated procedure steps resulting from Rule Change Proposal: Demand Side Management – Operational Issues (RC_2008_20). Please note that these changes will not constitute a part of the Market Procedure until commencement on 1 October 2010.

Ancillary to these changes, the IMO proposed a number of amendments to the Glossary and Defined Terms used in the Market Procedure.

3. PUBLIC CONSULTATION PERIOD

3.1 Submissions received

The public submission period was between 5 January 2010 and 2 February 2010. The IMO received submissions from Landfill Gas & Power (LGP), Perth Energy and Verve Energy during this period.

The details of the submissions received during the public submission period are summarised below. The full text of the submissions is available on the IMO website.

3.1.1 Submission from Landfill Gas and Power

LGP was generally supportive of the Procedure Change Proposal. However LGP made the following comments and suggestions:

- Step 1- review the use of the punctuation;
- Step 1.6- interchange sub-step 5 and 6 and making the new sub-step 6 (current sub-step 5) contingent on there being a legitimate need to challenge the date;
- Step 1.6.2 and 1.6.8- LGP would prefer to see a reasonableness obligation placed on the IMO regarding the costs of the calibration;
- Step 1.7.1- a Market Generator is required to be tested twice a year including the winter period, when there is a considerably diminished threat to system integrity. In contrast, Curtailable Loads are required to be tested only once a year, during the winter period when it is least likely to be needed. While LGP accepts this in good faith, it seems that generators should only be tested once a year unless the IMO has reason to test twice;
- Step 1.8.1- the reference to step 1.7.6 should refer to 1.7.1 in order to correct a “normal operation test” for ambient temperature. Ideally, step 1.7.6 would also acknowledge this condition as well;



- Step 1.7.5 (c)- LGP would prefer to see a reasonableness obligation that a nominated test date should have regard to the likelihood of the temperature being within specification so as to minimize costs (which could perhaps be included in sub-step7);
- Step 1.8.6- This is self-evident and insofar as it needs to be stated, should be included in the applicable clause;
- Step 1.8.10- delete “been”;
- Step1.9.1 (b)- the word “failed” is inappropriate, as a Facility might not pass because its STEM submissions didn’t merit it being called to operate at full output;
- Step 1.9.8 and 1.9.9- either eliminate the duplication (or harmonise the style) and harmonise with step 1.9.11;
- Step 1.9.14 (a)- reference may be incorrect and unnecessary;
- Step 1.9.15- remove the several clause references and simplify drafting;
- Step 1.9.16 (a)- reference may be incorrect and unnecessary;
- Step 1.10.3- delete “(either in all or in part)”; and
- Step 1.12.2- delete “either in part of in total”).

Wholesale Market Objectives

LGP considers that the IMO can be satisfied that PC_2009_10 is consistent with all the Wholesale Market Objectives.

3.1.2 Submission from Perth Energy

Perth Energy agrees that the Market Procedure needs updating to reflect the amendments to the Market Rules as a consequence of the commencement of RC_2008_20. They also agree with the intent of clarifying how to determine a pass or failure result with reference to temperature dependence curves.

Perth Energy considers that there may be potential to further clarify some aspects of the Market Procedure including:

- Step 1.7.5(b) – The wording could be amended to read “The Facility will be deemed to have passed a Reserve Capacity Test if the output of the Facility is at/or above the output required....”;
- Step 1.7.5(c) – stipulating in the procedure the required temperature range of the temperature dependence curves to be submitted by Market Participants and clarifying



that tests should not be performed if the ambient temperature is outside of the standardised temperature range of these curves; and

- Step 1.9.6 and 1.9.8 – Market Participants who fail the first test will have 5 Business Days less to identify and rectify any problem that may have caused the failure, ahead of being ordered to perform a re-test.

Perth Energy proposes that steps 1.9.6 and 1.9.8 retain the original 5 Business Days for the IMO to determine the results of the test and communicate the results to the Market Participant. Perth Energy was concerned that changing the period to 10 Business Days could lead to unforeseen consequences. Perth Energy was concerned about step 1.9.10 of the Market Procedure and clause 4.25.4 of the Market Rules, which require System Management re-test a Facility no earlier than 14 Business Days and no later than 28 Business Days after the first test (if failed).

Perth Energy notes that the proposed Market Procedure change would only allow a Market Participant 5 days to identify and rectify any problem that may have caused the failure of the test. Alternatively Perth Energy suggested that the IMO could change the reference in step 1.9.10 so that it reflects a certain period after the time when the Market Participant is physically informed of the result of the first test. The second solution would also require an amendment to clause 4.25.4 of the Market Rules.

Wholesale Market Objectives

Perth Energy considers that the proposed changes incorporating the proposed amendments above support Wholesale Market Objectives (a), (b) and (c). Perth Energy considers the proposed change relating to the IMO's time frame for reporting results could have an adverse impact on the achievement of Market Objectives (a) and (b) unless the Procedure Change Proposal is modified further as proposed above.

Perth Energy does not consider the Procedure Change Proposal impacts on the achievement of Market Objectives (d) and (e).

3.1.3 Submission from Verve Energy

Verve Energy supports the Procedure Change Proposal as it is consistent with current practices with respect to the procedure for Reserve Capacity Testing. However, Verve Energy notes that:

- Step 1.7.5 (b) and (c) – it does not seem reasonable for a Facility to fail a test if the output is not higher than the highest point of the temperature dependence curve where the ambient temperature measured at site exceeds the largest value supplied in the temperature dependence curve;
- In general, there does not seem to be any ability for Market Participants to request a review of the IMO's decision, in relation to transcript or calculation of data errors;
- If step 1.75 (b) and (c) are to apply then there should be provisions in the procedure to allow the IMO to deem a test invalid; and



- Determination of the Relevant Level continues to be based on ambient temperature considerations alone and does not account for potentially relevant weather factors and no allowance is made for uncertainty in the assessment.

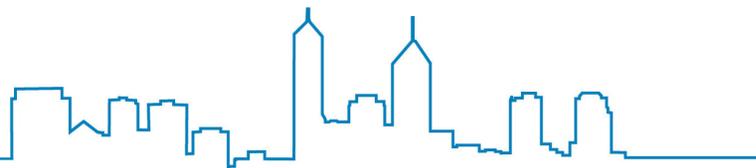
Wholesale Market Objectives

Verve Energy considers that the proposed procedure change is consistent with all the Wholesale Market Objectives.

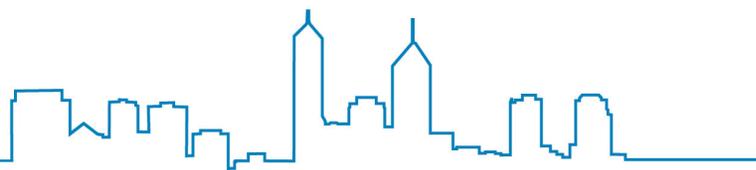
3.2 The IMO's assessment of Public Consultation period responses

The IMO's response to each of the issues raised during the consultation period is presented in the table over the page.

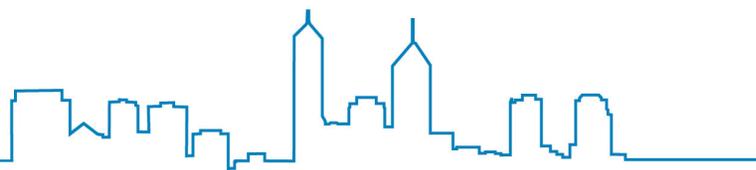
Step of Procedure	Submitter	Comment/Change Requested	IMO's response
1	LGP	Review the use of punctuation.	The punctuation has been reviewed and amended.
1.6	LGP	Interchanging sub-steps 5 and 6 and making new 6 contingent on there being a legitimate need to challenge the date.	Sub-steps 5 and 6 do not need to be interchanged. However, sub-step 6 (b) has been amended to read: <i>"...subject to step 1.6.5, propose another time which must be within 10 Business Days of the original request date."</i>
1.6.2 and 1.6.8	LGP	Prefer to see a reasonableness obligation placed on the IMO regarding the costs of calibration.	Testing is an important component of the Reserve Capacity Mechanism with the accuracy of data being central to the process. SCADA is only used by a small number of Market Participants with regards to conducting tests, with many choosing the alternative of using BOM station data. Given the alternative option of using BOM data the costs of calibration can be avoided. As such a reasonableness obligation is not deemed to be required as Market Participants can make their own business decisions around the use of this information for calibration purposes.
1.7.1	LGP	Generators should only be tested once a year unless the IMO has reason for suspicion.	Clause 4.25.1 of the Market Rules requires the IMO to take steps to verify that Facilities providing Capacity Credits can operate at its maximum Reserve Capacity Obligation Quantity at least once during both the Summer (1 October to 31 March) and Winter (1 April to 30 September) Testing Periods. The Market Procedure is consistent with the provisions in the Market Rules. There is a reduced threat to system integrity during the winter period but addressing this is outside the scope of the Procedure Change Proposal.
1.7.5 (b)	Perth Energy	Should read "The Facility will be	The Market Procedure has been amended to include this



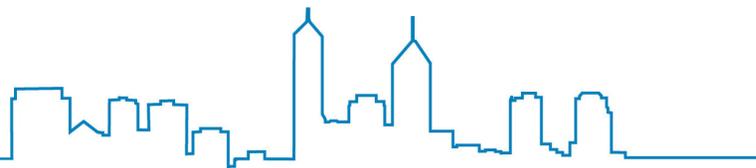
Step of Procedure	Submitter	Comment/Change Requested	IMO's response
		deemed to have passed a Reserve Capacity Test of the output of the Facility is <u>at or above</u> output required..."	suggestion.
1.7.5 (b)	Verve Energy	It doesn't seem reasonable that a Facility will not pass a Reserve Capacity Test if the output is not higher than the highest point of the temperature dependence curve.	<p>The Reserve Capacity testing regime ensures that the WEM has reliable capacity and as such a facility cannot pass a test if it is unclear whether the Facility can provide capacity at a level equivalent to its Capacity Credits at 41°C.</p> <p>It would not be appropriate to fail or not pass a Facility as part of one of the two formal tests required under section 4.25 of the Market Rules if the temperature was at an extremely unlikely temperature.</p> <p>Therefore, the procedure has been amended to allow testing to only be conducted between 0-45°C otherwise the test will be deemed invalid (new steps 1.9.16 to 1.9.20). However, it is still the Market Participant's choice to provide a temperature dependence curve with a smaller temperature range.</p>
1.7.5 (c)	Verve Energy	It's not reasonable for a Facility to fail a test if the lower bound of the temperature dependence curve ends at 10°C and the ambient temperature in the test was lower than 10°C.	The aim of Reserve Capacity testing is to ensure capacity at 41°C is available. If the temperature is less than the minimum Temperature Dependence Curve, there could be an unknown factor which would mean to run at a lower temperature would require a much higher output. The IMO needs to ensure that the capacity will be available at 41°C and can only do so if a curve exists. The IMO considers that the temperature range of 0°- 45°C for testing should enable a Market Participant to quantify the risks to its Capacity Credit allocation if it submits a de-rate curve less than the testing range.
1.7.5 (c)	Perth Energy	Preferable to stipulate in the procedure the required temperature range of the	Clause 4.12.3 of the Market Rules state that capacity must be available at all times, therefore the IMO is reluctant to define a



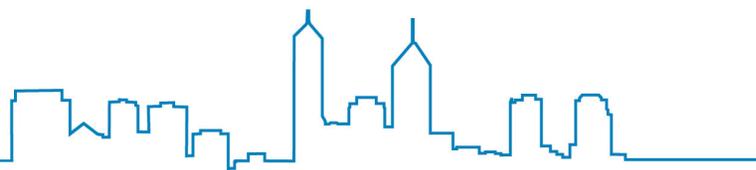
Step of Procedure	Submitter	Comment/Change Requested	IMO's response
		temperature dependent curves submitted by Market Participants and clarify that tests should not be performed if the ambient temperature is outside of the standardised temperature of these curves.	specific temperature range in the Market Procedure. Instead the Market Procedure has been amended to include new steps 1.9.16 to 1.9.20. These steps clarify that all tests performed outside of the 0- 45°C range will be deemed invalid but Market Participants may submit any temperature range.
1.7.5(c)	Perth Energy	It seems anomalous that a Facility may automatically fail a Reserve Capacity Test if called to perform a test on a cold winter night, despite having an output exceeding those stipulated by the lowest temperature point of the temperature dependence curve.	The Market Rules require a Facility to be available at all times therefore must be available to be tested when called.
1.7.5 (c)	LGP	Prefer to see a reasonableness obligation that a nominated test date should have regard to the likelihood of the temperature being within specification so as to minimize costs.	There is a need for a reasonableness obligation. As such, new steps 1.9.16 to 1.9.20 have been included in the Market Procedure that allows for a test to be deemed to be an Invalid Test if the temperature range is outside of the range 0- 45°C.
1.8.1	LGP	Reference to step 1.7.6 in step 1.8.1 should refer to 1.7.1.	The proposed Market Procedure has been amended.
1.8.6	LGP	The requirement to adjust the results to the equivalent values at a temperature of 41°C is self-evident and insofar as it needs to be stated, should be included in the applicable clause.	Step 1.8.6 has been removed from the Market Procedure. Additionally, a new step 1.7.5 has been included to explain how the IMO determines the Reserve Capacity Testing Level.
1.8.10	LGP	Delete "been".	'Been' has been deleted from step 1.8.10.
1.9.1 (b)	LGP	Word "failed" is inappropriate, as a Facility might not pass because its STEM submissions didn't merit it being called to operate at full output.	The word "failed" may be inappropriate in the cases of a Facility being verified by the observation process only. When the Market Rules refer to a test, "failed" is appropriate because you either pass or fail. Thus, step 1.9.1 (b) has been amended



Step of Procedure	Submitter	Comment/Change Requested	IMO's response
			to read 'has not passed' instead of 'failed'.
1.9.8 and 9	LGP	Eliminate the duplications in these clauses and harmonise with step 1.9.11.	The IMO agrees, but instead of harmonising step 1.9.8 and 9 with 1.9.11, clause 1.9.11 has been removed. This allows for the procedure to still contain the different timing obligations on the IMO depending on whether the test is passed or failed.
1.9.10	Perth Energy	With the proposed changes a Market Participant with a Facility that fails the first test will have 5 Business Days less to identify and rectify any problem that might have caused the failure, ahead of being ordered to perform a re-test. Either retain 5 business days in step 1.9.6 and 1.9.8 or change the reference in 1.9.10.	There is uncertainty around the number of days specified in step 1.9.6 and 1.9.8. The IMO has always regarded these two clauses as consecutive and not parallel and as such there is 10 business days in total for the IMO to determine a Facility as either a pass or fail and then inform the Market Participant with a copy of the results. The IMO has amended steps 1.9.6 and 1.9.8 to specify 10 Business Days in total to clarify.
1.9.14 (a)	LGP	We perceive the reference to be incorrect and unnecessary.	The reference is incorrect and has been updated to step 1.9.14. The reference has been retained as it defines that the Facility can only be re-tested once.
1.9.15	LGP	Remove the several step references and write it plainly instead.	The step references are necessary because there are different time frames for a failed test in comparison to a passed test. However, the IMO has redrafted the procedure step.
1.9.16	LGP	Reference is incorrect and unnecessary.	Step 1.9.16 is necessary as it reiterates what is in the Market Rules, The reference to clause 4.25 is to clarify that the reference is to Reserve Capacity Testing only. There are settlement implications with this clause, in particular the reference to energy scheduled in the test. Under clause 4.29.4 if a Facility fails a test twice then its Capacity Credits are reduced under clause 4.25.4. In this case they must pay the IMO refunds which affects settlement. As a result the IMO considers this Procedure step is necessary.



Step of Procedure	Submitter	Comment/Change Requested	IMO's response
1.10.3	LGP	Delete "(either in all or in part)"	The Market Procedure has been amended to include this suggestion.
1.12.2	LGP	Delete "either in part of in total"	The Market Procedure has been amended to include this suggestion.
General	Verve Energy	Doesn't seem to be any ability for participants to request a review of IMO's decisions in relation to errors made in transcript or calculation of data against temperature dependant curves.	Market Participants should be able to request a review of IMO's decisions in relation to errors in transcript or calculation of data. A new step 1.10.6 has been included in the Market Procedure to reflect this. With over 90 Facilities expected to be operating in the WEM in 2011 the addition of this could cause large delays to processing of Reserve Capacity testing results and as such may lead to procedure and rule breaches. If this turns out to be the case the IMO may review the addition of this step.
General	Verve Energy	For 1.7.5 (b) and (c) to apply there should be provisions in the procedure to allow the IMO to deem a test invalid.	The Market Procedure has been amended to allow the IMO to deem a test invalid.
General	Verve Energy	Determination of the Relevant Level does not account for other relevant weather factors.	It is up to the Market Participant to adopt a risk strategy to mitigate the likelihood of failing a Reserve Capacity test under different weather conditions.
General	Verve Energy	No allowance is made for uncertainty in the assessment of Reserve Capacity.	Accounting for uncertainty in the assessment of Reserve Capacity is inappropriate as the IMO needs to ensure reliability.



3.3 Public Workshop

No Public Workshop was held in relation to this Procedure Change Proposal.

4. THE IMO'S ASSESSMENT

In determining whether to accept the Procedure Change Proposal, the IMO has assessed the Procedure Change Proposal in light of clauses 2.9.3 (a) of the Market Rules.

Market Rules 2.9.3 (a) outlines that Market Procedures must be:

- developed, amended or replaced in accordance with the process in the Market Rules;
- consistent with the Wholesale Market Objectives; and
- consistent with the Market Rules, the Electricity Industry Act and Regulations.

Additionally, clause 2.10.13 states that the Procedure Change Report prepared by the IMO must contain the following:

- the wording of the proposed Market Procedure or amendment to or replacement for the Market Procedure;
- the reason for the proposed Market Procedure or amendment to or replacement for the Market Procedure;
- all submissions received before the due date, a summary of those submissions and the response of the IMO or System Management, as applicable, to any issues raised;
- a summary of the views of the Market Advisory Committee (MAC); and
- a proposed date and time for the Market Procedure or amendment to or replacement to commence, which must allow sufficient time, in the IMO's opinion, after the date of publication for Rule Participants to implement changes required by it.

The IMO's assessment is outlined in the following sections.

4.1 Wholesale Market Objectives

In accordance with clause 2.9.3(a) ii. of the Market Rules, Market Procedures must be consistent with the Wholesale Market Objectives. The IMO considers that the Market Procedure, as a whole, if amended will be consistent with the Wholesale Market Objectives.

Wholesale Market Objective	Consistent with objective
(a) to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system	Yes

Wholesale Market Objective	Consistent with objective
(b) to encourage competition among generators and retailers in the South West interconnected system, including by facilitating efficient entry of new competitors	Yes
(c) to avoid discrimination in that market against particular energy options and technologies, including sustainable energy options and technologies such as those that make use of renewable resources or that reduce overall greenhouse gas emissions	Yes
(d) to minimise the long-term cost of electricity supplied to customers from the South West interconnected system	Yes
(e) to encourage the taking of measures to manage the amount of electricity used and when it is used	Yes

Further, the IMO considers that the steps of the Market Procedure, if amended, are drafted in such a way that the Market Procedure would better address Wholesale Market Objective (a):

Impact	Wholesale Market Objectives
Allow the Market Rules to better address objective	a
Consistent with objective	b, c, d, e
Inconsistent with objective	-

(a) *to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West Interconnected System*

Further clarification of the process taken by the IMO to test a Facility's ability to meet its Reserve Capacity Obligations will ensure efficient and reliable production and supply of electricity by allowing greater transparency in the testing process.

4.2 Wholesale Market Rules, the Electricity Industry Act and Regulations

The IMO considers that the proposed new Market Procedure for Reserve Capacity Testing is consistent as a whole, with the Market Rules, the Electricity Industry Act and Regulations.

The IMO also considers that the proposed amended Market Procedure is consistent with all other Market Procedures.

4.3 Views expressed in submissions

The IMO received three submissions from LGP, Perth Energy and Verve Energy. The IMO's responses to the issues raised during submissions are provided in section 3.2 of this report.



4.4 Implementation of the Market Procedure

The amended Market Procedure will not require Rule Participants or the IMO to implement any procedural or system amendments before it can commence.

As previously indicated, the updates required for consistency with the Rule Change Proposal: Demand Side Management Operational Issues (RC_2008_20) will not commence until 1 October 2010. To ensure that the amended Market Procedure is both clear and understandable, the IMO considers it appropriate to commence the proposed amendments in two parts:

- 8:00am on 1 June 2010 for the initial changes (Version 2); and
- 8:00am on 1 October 2010 for the changes required for consistency with the Amending Rules resulting from RC_2008_20 (Version 3).

The IMO considers that this will allow Rule Participants sufficient time from the date of publication of this Procedure Change Report to ensure compliance with the amended Market Procedure.

4.5 Views of the Market Advisory Committee

The MAC did not meet to discuss the proposed Market Procedure. The proposed amendments were however discussed at the IMO Market Procedures Working Group on 13 August 2009.

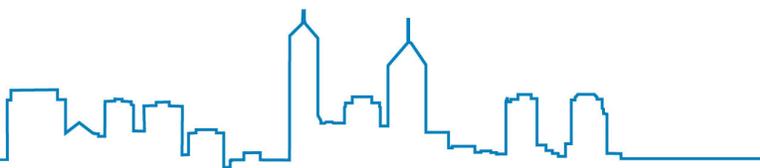
The Working Group was in general support of the proposed amendments to the Market Procedure. The Working Group did however make a number of recommendations which were adopted by the IMO prior to formally submitting the proposal into the process. Further details of the agreed amendments to the Market Procedure are outlined in the meeting minutes available on the IMO's website: <http://www.imowa.com.au/IMO-Procedures-Working-Group>.

5. THE IMO'S DECISION

The IMO's decision is to approve the proposed Market Procedure for Reserve Capacity Testing as proposed in the Procedure Change Proposal and updated following the public consultation process.

The IMO has made its decision on the basis that the amended Market Procedure for the determination of Maximum Reserve Capacity Price:

- is consistent with the Wholesale Market Objectives;
- improves consistency with the Market Rules, Electricity Industry Act and Regulations; and
- requires no system changes prior to implementation.



Additional detail outlining the analysis behind the IMO's reasons is outlined in section 4 of this Procedure Change Report.

6. THE AMENDED MARKET PROCEDURE

6.1 Commencement

The commencement order for the amendments to the Market Procedure for Reserve Capacity Testing is as follows:

- 8:00am on 1 June 2010 – Initial amendments to Market Procedure (Version 2); and
- 8:00am on 1 October 2010 – Further amendments to Market Procedure to ensure consistency with the Amending Rules resulting from RC_2008_20 (Version 3).

The wording of the amended Market Procedure for Reserve Capacity Testing (Version 2 and 3), as proposed by the IMO and updated following the public consultation period, is available on the IMO's website: http://www.imowa.com.au/PC_2009_10