INDEPENDENT MARKET OPERATOR

Market Advisory Committee

Agenda

Meeting No.	53
Location:	IMO Board Room Level 17, Governor Stirling Tower, 197 St Georges Terrace, Perth
Date:	Wednesday 12th September 2012
Time:	2.00pm – 5.00pm

Item	Subject	Responsible	Time
1.	**WELCOME**	**Chair**	2 min
2.	**MEETING APOLOGIES / ATTENDANCE**	**Chair**	2 min
3.	**MINUTES FROM MEETING 52**	**Chair**	5 min
4.	**ACTIONS ARISING**	**Chair**	20 min
5.	**MARKET RULES**		
	a) Market Rule Change Overview	**IMO**	5 min
	b) Market Rules Evolution Plan (outcomes from voting, verbal)	**IMO**	15 min
	c) PRC_2012_07: Loss Factor Determination	**IMO**	20 min
	d) PRC_2012_15: 4 month Commissioning Test window for new generating systems	**IMO**	15 min
6.	**DISCUSSION PAPERS**		
	a) CP_2012_03: Dispatch Tolerance Ranges	**IMO**	20 min
7.	**MARKET PROCEDURES**		
	a) Overview	**IMO**	5 min
8.	**WORKING GROUPS**		
	a) Overview and membership updates	**IMO**	5 min

Item	Subject	Responsible	Time
	b) RCMWG Update (verbal)	**IMO**	10 min
9.	**GENERAL BUSINESS**		
10.	**NEXT MEETING: 10th October 2012 (2.00-5.00pm)**		

Minutes

Meeting No.	52
Location	IMO Board Room Level 3, Governor Stirling Tower, 197 St Georges Terrace, Perth
Date	Wednesday 8 August 2012
Time	2.05pm – 3.15pm

Attendees	Class	Comment
Allan Dawson	Chair	
Suzanne Frame	Compulsory - IMO	
Patrick Peake	Discretionary – Generator (Proxy)	
Ben Tan	Discretionary – Generator	
Shane Cremin	Discretionary – Generator	
Steve Gould	Discretionary – Customer	
Michael Zammit	Discretionary – Customer	
Peter Huxtable	Discretionary – Contestable Customer Representative	
David Murphy	Small Use Consumers' Representative	
Nerea Ugarte	Minister's appointee - Observer	
Stephen MacLean	Compulsory – Customer	
Andrew Everett	Compulsory – Generator	
Phil Kelloway	Compulsory – System Management	
Peter Mattner	Compulsory- Network Operator	
Wana Yang	ERA – Observer	(arrived at 2.15pm)
Apologies	**Class**	**Comment**
Nenad Ninkov	Discretionary – Customer	
Geoff Gaston	Discretionary – Generator	
Also in attendance	**From**	**Comment**
Fiona Edmonds	IMO	Observer
Courtney Roberts	IMO	Observer
Greg Ruthven	IMO	Observer
Jenny Laidlaw	IMO	Observer
Natasha Cunningham	IMO	Minutes

Item	Subject	Action
1.	**WELCOME** The Chair opened the meeting at 2.05 pm and welcomed members to the 52nd meeting of the Market Advisory Committee (MAC).	
2.	**MEETING APOLOGIES / ATTENDANCE** The following apologies were received: • Geoff Gaston (Discretionary - Generator) • Nenad Ninkov (Discretionary- Customer) The following other attendees were noted: • Patrick Peake (proxy for Nenad Ninkov) • Fiona Edmonds (Observer) • Jenny Laidlaw (Observer) • Greg Ruthven (Observer) • Courtney Roberts (Observer) • Natasha Cunningham (Minutes)	
3.	**MINUTES OF PREVIOUS MEETING** The minutes of MAC Meeting No. 51, held on 11 July 2012, were circulated prior to the meeting. The Chair noted that prior to the meeting Ms Wana Yang circulated to MAC members some suggested changes to the minutes. A copy of these changes is contained in Appendix 1 of these minutes. The changes related to the discussion of the Rule Change Proposal: Reassessment of Allowable Review during a Review Period (RC_2011_02). The MAC agreed with the amendment of the minutes to reflect the changes suggested by Ms Yang. *Action Point:* • *The IMO to amend the minutes of Meeting No. 52 to reflect the changes proposed by Ms Wana Yang in her email to MAC members and publish on the Web Site as final.*	**IMO**
4.	**ACTIONS ARISING** The following comments were noted on action items: • Item 33 – The Chair advised that the IMO intended to present an updated version of the Pre Rule Change Proposal: Ancillary Services Payment Equations (PRC_2010_27) to the MAC at its October 2012 meeting. • Item 43 – Mr David Murphy noted the Public Utilities Office (PUO) had considered the dual fuel issue further and concluded that the market had	

	moved on in various ways since the initial recommendations relating to dual fuel were made. The PUO therefore wished to consider further whether the recommended approach was the best way to achieve the desired outcomes. Mr Murphy's team also wished to discuss with the new Deputy Director General of the PUO how the dual fuel issue fitted in with the priorities of the PUO and its work more broadly across the sector. The PUO proposed to come back to the MAC at a later date if further action by the MAC was required. In response to a question from Mr Stephen MacLean, Mr Murphy confirmed that the PUO was not currently intending to publish a discussion paper on the issue. There was some discussion around whether the action item should remain open. Mr Murphy recommended that as the PUO intended to reconsider the issue the action item should be closed. The MAC agreed to close this issue. • Item 10 – In response to a query from Mr Peter Mattner, Mr Greg Ruthven confirmed that discussions with Western Power on this action item had not yet commenced. • Items 11 and 23 – Mr Phil Kelloway confirmed that distribution connected generators were to be provided with notification of outages 72 hours prior to the outage commencing through conventional communication methods, which may include Australia Post or a letter drop. Mr Ben Tan noted that Tesla had never received a paper notification of an outage. Mr Kelloway responded that this suggested that further investigation and changes to Western Power processing may be required. The Chair suggested that more robust arrangements may exist for important large loads (for example the Water Corporation, hospitals etc.) on the distribution network. Mr Kelloway offered to investigate what arrangements were in place for these loads and report back to the MAC. *Action Point:* • *System Management to advise the MAC on the arrangements for notifying customers with important large loads on the distribution network of outages.* • Item 22 – Mr Ruthven informed the MAC that the original action item, which had been completed, was to update the historical load profile used for forecasting for the availability curve analysis. Mr Ruthven noted that the reference to the 2003/2004 year in the 2012 Statement of Opportunities (SOO) related only to its being regarded as the most recent case of a 10% Probability of Exceedance (POE) peak demand year. • Item 25 – Ms Suzanne Frame noted that the initial list of issues for the Market Rules Evolution Plan (MREP) was to be presented later in the meeting. • Items 26 and 27 – Ms Frame informed the MAC that action item 26 had been incorporated into action item 27 and the Rule Change Proposal: Clarification of Clause 2.10.2A (PRC_2012_06) will be formally submitted into the rule change process in mid-August. Mr MacLean queried action item 26 and wanted to confirm the length of the proposed period during which a review of a Reviewable Decision could be requested. Ms Fiona	**System Mgmt**

	Edmonds explained that the date was derived from the Regulations which stipulated 28 days and that the IMO was going to refer to the timelines illustrated in the Regulations in its drafting. • Item 9 –Mr Ruthven provided an overview and update of the analysis results distributed for the previous MAC meeting. The MAC had requested the IMO undertake an analysis of the current Relevant Demand (RD) methodology against the methodology proposed by EnerNOC in its Pre Rule Change Proposal: Relevant Demand for a Demand Side Programme (PRC_2012_02). Mr Ruthven explained that at the time of analysis there were eight Demand Side Programs (DSPs) in operation with more than one Associated Load. Of these DSPs, four showed a higher RD using EnerNOC's methodology while four showed a lower RD, with the net outcome being an increase in total RD of about 4%. Mr Ruthven noted that since the original analysis was completed there had been changes to the Associated Loads for one DSP and the commencement of a new DSP. One of these showed a decrease of 2.4% using EnerNOC's methodology and the other an increase of 2.3%. Mr Ruthven did not consider there to be anything statistically significant in the results. Mr Michael Zammit advised that EnerNOC had undertaken its own analysis and its results aligned with those of the IMO. Mr MacLean noted that EnerNOC's methodology did not increase the number of Capacity Credits assigned to a DSP. Mr MacLean considered that it made sense to move to a system where changing the Associated Loads in a DSP would not disadvantage or reward any of the Loads in that DSP and so supported the progression of the proposal. The Chair considered that provided there was no substantive impact on the Capacity Credits allocated, the increase in transparency stemming from this rule change would be beneficial to the Market. The MAC supported the formal submission of the proposal into the rule change process. *Action Point:* • *EnerNOC to formally submit the Pre Rule Change Proposal: Relevant Demand for a Demand Side Programme (PRC_2012_02) into the rule change process.*	**EnerNOC**
5a.	**MARKET RULE CHANGE OVERVIEW** Ms Frame provided an update to the MAC on the current Rule Changes under development. Ms Frame noted that the high priority rule change on Commissioning will be presented to the MAC at the September 2012 meeting. The MAC noted the overview of recent and upcoming rule changes.	
6a.	**MARKET PROCEDURE CHANGE OVERVIEW** Ms Frame informed the MAC that an IMO Procedure Change and Development Working Group meeting had been scheduled for 14 August 2012, to discuss proposed amendments to four Market Procedures including Certification of Reserve Capacity, Maximum Reserve Capacity Price, Declaration of Bilateral Trades and the Reserve Capacity Auction and	

	Prudential Requirements. The MAC noted the overview of recent and upcoming procedure changes.	
7a.	**WORKING GROUP OVERVIEW** The MAC noted the Working Group overview.	
7b.	**RDIWG UPDATE** Ms Frame advised the MAC that the final meeting of the Rules Development Implementation Working Group (RDIWG) is scheduled for 19 September 2012. The meeting will be followed by refreshments to thank members for their contribution to the Working Group. Mr MacLean queried if feedback would be provided to the RDIWG on the operation of the new Balancing and Load Following Service Markets. The Chair replied that the IMO would be happy to provide an update at the final RDIWG meeting and noted that the IMO had been communicating regularly with Market Participants' operational staff on the progress of the new markets, initially meeting on a weekly basis. These meetings were now scheduled to be held monthly.	
7c.	**RCMWG UPDATE** Ms Frame noted that the Reserve Capacity Mechanism Working Group (RCMWG) met on 12 July 2012. The purpose of the meeting was to formalise agreement in light of the half day workshop held by the IMO on alternative solutions for revising the Reserve Capacity Price formula to address the current oversupply of capacity, and also to formalise agreement on performance requirements to harmonise DSPs with other forms of peaking capacity. Ms Frame noted that there had been a number of emails circulated by working group members since the previous meeting, revisiting issues discussed at the workshop. Ms Frame proposed to add an agenda item to the September 2012 RCMWG meeting so that Mr Mike Thomas can respond to any perceived unresolved issues relating to that work stream. Ms Frame informed the MAC that the working group had introduced a new work stream in July to revisit historical discussions around the concept of a dynamic refund mechanism. Ms Frame indicated that Mr Thomas would be preparing a paper outlining key options and that the paper will be presented to the RCMWG at the September 2012 meeting. The next RCMWG meeting was scheduled for 16 August 2012. The primary items on the agenda were a paper compiled by Dr Richard Tooth investigating potential refinements to the method for calculating Individual Reserve Capacity Requirements and a presentation from Mr Ruthven on the impact of forecast error on the Reserve Capacity Requirement. Mr MacLean requested that Mr Thomas' presentation from the half day workshop be published on the IMO website. *Action Point:* • *The IMO to publish Mr Mike Thomas' presentation from the half day RCMWG workshop held on 4 July 2012 on the IMO website.*	**IMO**

8.	**MARKET RULES EVOLUTION PLAN** Ms Frame noted that the IMO, in conjunction with System Management and the PUO, had held a number of meetings with stakeholders to discuss issues/areas of development that warrant consideration for inclusion in the soon to be revised MREP. Ms Frame informed the MAC that there was a fairly consistent theme evident from discussions with stakeholders, that a period of consolidation in the market was warranted given the large volume of changes made in the past couple of years. Ms Frame noted that she had compiled the list of issues that remained outstanding from the previous plan and incorporated current stakeholder suggestions. The updated list was circulated to MAC members with the MAC meeting papers. Ms Frame noted that the IMO had separated out those issues that were State energy policy issues and would require further consideration from the PUO. The following points were discussed: • Mr Kelloway queried the timeline for the implementation of PA Consulting's recommendations on the outage planning process, asking if during the next financial year the recommendations with respect to the transparency of information (phase 1) and improvement to the processes (phase 2) would be progressed. Ms Frame responded that the IMO was currently progressing the Rule Change Proposal to implement greater transparency of outage information and that the proposed amendments to improve the outage processes would be progressed in late 2012. Ms Frame clarified that the IMO met recently with System Management with respect to the issues for consideration during phase 2. The Chair also noted that the outage planning process, whilst not featuring heavily in the issues list, was raised consistently during MREP meetings with various stakeholders. • Mr MacLean requested that the IMO include a review of the governance arrangements in the WEM on the list of policy issues. • Mr Kelloway requested clarification of how the MREP would fit in with the IMO's rule change suggestions log. Ms Frame clarified that the list of issues in the log were operational in nature while the MREP list was more strategic in nature. • Mr Peter Mattner suggested that the provision of a criterion for prioritisation of the issues would be useful. The Chair clarified that the Market Objectives would be the appropriate criteria to apply. The Chair requested members to consider what issues would be significant for their organisation and prioritise the list accordingly. The Chair requested that each member of the MAC have one week to consider what issues they would like to include on the issues list and suggest any further issues. Following this the IMO will provide a prioritisation list for each member to complete. *Action Points:* • *The IMO to include a review of the WEM's governance arrangement on the list of policy issues that would require further consideration by the PUO before being incorporated into the MREP.*	**IMO**

	• *MAC members to review the issues list and provide the IMO with details of any additional items for inclusion on the list by Wednesday, 15 August 2012.* • *The IMO to send out the final list of issues and a copy of the prioritisation form for MAC members to complete.*	**All** **IMO**
9.	**CONCEPT PAPER: EARLY ENTRY CAPACITY PAYMENTS** The Chair invited Mr MacLean to discuss Synergy's concept paper on the cost and benefit trade-off of early capacity payments. Mr MacLean noted that this paper was prepared following the discussion at the June 2012 MAC meeting with respect to the Rule Change Proposal: Limits to Early Entry Capacity Payments (RC_2012_10). In particular, during the June 2012 MAC meeting there had been some discussion as to whether it might be appropriate to remove the early entry payments in their entirety. Mr MacLean noted that there were other options for consideration with respect to the wider question around the continued appropriateness of early entry capacity payments. The following discussion points were noted: • The Chair noted that the need to incentivise the early entry of capacity can depend on the capacity situation in the Market at that time. The original rule change that amended the entry period had been progressed when the market was experiencing a shortage of capacity and a potential Supplementary Reserve Capacity event. The capacity situation in the market is now markedly different. • Mr MacLean advised that Synergy had identified option D as the most likely to be agreeable to MAC members. Mr MacLean stipulated that option D entailed the IMO assessing and making the decision if early payments were required potentially a year before the capacity is needed. • Mr Kelloway noted concern about the IMO's ability to determine capacity shortfalls significantly ahead of time. • Mr Tan noted his concerns that signalling the applicability of early entry payments a year before would be too late for a Market Generator to adjust its commissioning schedule. The Chair noted that transparency of the criterion applied by the IMO would allow potential investors the relevant information to determine whether it was likely that early entry payments would apply. Mr Tan indicated his support with installing some flexibility but noted that financiers like simple clear-cut concepts. Mr Tan indicated his support for a mechanism to be in place with which the IMO had the responsibility to make a decision, however, the decision needed to be made as soon as possible by the IMO so as to provide the appropriate signals to the market bring forward the entry of capacity into the market. • Mr Peake noted that the original concept of the window of entry had been included into the Market Rules to ensure that Commissioning Tests of various facilities were spread out; thereby ensuring System Management had the capacity to enable required testing prior to the	

	hot season. Discussion ensued as to the complexities of commissioning various types of capacity and whether it would be more appropriate to target SRC costs specifically to a facility that causes the event that was late in undertaking commissioning. • Mr Murphy noted that this issue seemed to be a fundamental market policy issue rather than an operational issue and suggested that the PUO should further consider whether a policy direction would be appropriate. Mr Murphy noted that a robust long term solution was needed. The Chair acknowledged Mr Murphy's comment that the PUO had offered to take on this matter and suggested that the PUO report back to the MAC at the September 2012 meeting with some preliminary feedback and timelines for its consideration of the wider issue of incentivising early entry of capacity. Mr Murphy noted that the PUO would consult further with the MAC in determining a policy direction. *Action Point:* • *The PUO to consider the issue of incentivising early entry of capacity and provide the MAC with details on the next steps in the process for addressing the issue from a policy perspective at the September 2012 MAC meeting.*	**PUO**
10.	**GENERAL BUSINESS** Mr Zammit informed the MAC that he will be on leave in September and put forward his proxy, Dr Paul Troutman for the next MAC meeting.	
CLOSED: The Chair declared the meeting closed at 3.15 pm.		

APPENDIX 1: Amendments to the Minutes of Meeting No. 51 proposed by Ms Wana Yang

Item	Subject	Action
9.	**GENERAL BUSINESS** ***RC_2011_02: Reassesssment of Allowable Review during a Review Period:*** Ms Frame advised the MAC that this Rule Change Proposal was submitted in 2011 which was initiated from the ERA in relation to the reassessment of allowable revenue. ~~The Chair provided an overview of the issues that ERA raised in the original Rule Change Proposal, which was initiated in response to the situation where the MEP project failed to trigger a Declared Market Project, and the ERA were not in a position to respond to a direct request from the IMO to make an assessment of the project.~~ Ms Frame outlined that in the Draft Rule Change Report, the IMO Board sought the views of Market Participants on their concerns around specific elements of the changes relating to the proposed thresholds. It was noted that in the second submission period there were no submissions received in relation to the IMO Board's specific request. This Rule Change was approved by Minister on 3 July 2012 however, the Minister did note that IMO should consider undertaking further consultation to identify any additional amendments relating to the provisions needed to be in place before the amending rules commence on 1 July next 2013. Ms Frame requested the advice of the MAC to see if members would like the IMO to consider any further amendments in relation to these provisions in order to fulfil the request of the Minister. Ms Frame noted that as the Rule Change had already been approved by the Minister, any further amendments to the provisions would require a new Rule Change Proposal since the Market Rules do not contemplate the ability to undertake further consultation on a Rule Change that has already been approved. Ms Frame advised the MAC that The IMO Board considered the original Rule Change Proposal as proposed by ERA, but modified the proposed 10% threshold for Allowable Revenue to remain at 15%, while incorporating the recommended 10% to a Capital Expenditure threshold. Ms Wana Yang requested some context be provided as there were no relevant documents provided to the MAC members at the meeting. The Chair provided an overview of the issues that ERA raised in the original Rule Change Proposal, which was initiated in response to the situation where the MEP project failed to trigger a Declared Market Project, and the ERA were not in a position to respond to a direct request from the IMO to make an assessment of the project. Ms ~~Wana~~ Yang explained the two main concerns by the ERA, i.e. the consultation process and the decision making by the IMO Board. Ms Yang noted the support from the MAC when the pre-rule change concept paper was discussed at the MAC meeting and the support presented in the submissions during the first consultation period. However, the IMO Board changed the Rule Change Proposal in its Final Rule Change Report from the	

	Draft Rule Change Report without undertaking further consultation with Market Participants. Given that only two Rule Participants are directly affected by this Rule Change Proposal, i.e. the IMO and System Management, the decision by the IMO Board also gave rise to perceived conflict of interest in regard to governance. ~~that throughout the process the ERA believed to have full support from the Market for their Rule Change and that she did not believe that the end result reflected the right outcome.~~ The Chair responded that the IMO Board requested the Market's views on their draft decision which was presented in the Draft Rule Change Report in which no submissions were received in the second consultation period. Discussion ensued where a number of MAC members clarified that the request from the Board had been made at Draft Rule Change Report stage and had been subject to a full consultation period; where no submissions were received on the matter. The Chair confirmed that if a project half the size of MEP was initiated today it would trigger the threshold for a Declared Market Project, and highlighted that while the IMO Board had made the decision, the ultimate outcome was subject to Ministerial Approval. There was general acknowledgment from the MAC that the Rule Change had significantly improved governance; however Ms Yang reiterated her concerns with maintaining the 15% Allowable Revenue threshold. The Chair acknowledged Ms Yang's concerns and offered the opportunity for the ERA and Secretariat to meet with the IMO Management and IMO Board to discuss the issue. No further issues were raised on this matter and the Chair welcomed the ERA and the IMO to discuss this further offline if necessary.	

Agenda item 4: 2012 MAC Action Points

Legend:

Shaded	Shaded action points are actions that have been completed since the last MAC meeting.
Unshaded	Unshaded action points are still being progressed.
Missing	Action items missing in sequence have been completed from previous meetings and subsequently removed from log.

#	Year	Action	Responsibility	Meeting arising	Status/Progress
33	2011	The IMO to consider the suggested amendments to the Pre Rule Change Discussion Paper: Ancillary Services Payment Equations (PRC_2010_27) provided by Mr Stephen MacLean, and update the proposal as appropriate.	IMO	June	Underway. Currently scheduled to go to the October MAC.
43	2011	The Public Utilities Office to provide the MAC with an update on progress around the implementation of incentives for dual fuel facilities in the Wholesale Electricity Market.	PUO	Dec	Closed. Following discussion at the August MAC meeting this item has been formally removed from the Action Points.
10	2012	The IMO and Western Power to consider a revised design for the treatment of NCS facilities which ensures that the costs associated with avoiding a network upgrade via entering into a NCS Contract will accrue to the Network Operator.	IMO/WP	Apr	Underway. The IMO notes that it will work through the issues raised during the 18 April 2012 MAC meeting with Western Power over the upcoming months.

#	Year	Action	Responsibility	Meeting arising	Status/Progress
11	2012	System Management to consider whether any process changes for approving network outages could be possible to ensure that Market Generators are provided with sufficient notice of the outage.	SM	Apr	
22	2012	System Management to contact the IMO to discuss System Management's query on a reference to a 10% POE peak demand event for the 2003/2004 year in the 2012 Statement of Opportunities.	SM	Jul	Underway.
23	2012	Mr Kelloway to confirm who from System Management will notify distribution connected Generators about network outages.	SM	Jul	Underway
25	2012	The IMO to present the consolidated issues list resulting from the Market Rules Evolution Plan meetings to the August 2012 MAC meeting.	IMO	Jul	Completed
26	2012	The IMO to consider aligning the days to ask for a review of a Reviewable Decision in the Market Rules (10 Business Days) with the days prescribed in the Regulations (28 days).	IMO	Jul	Underway.
27	2012	The IMO to formally submit PRC_2012_06 into the Fast Track Rule Change Process subject to considering the days allowed for a Reviewable Decision	IMO	Jul	Underway.
28	2012	The IMO to amend the minutes of Meeting No. 51 to reflect the changes proposed by Ms Wana Yang in her email to MAC members and publish on the Web Site as final.	IMO	Aug	Completed
29	2012	System Management to advise the MAC on the arrangements for notifying customers with important large loads on the distribution network of outages.	SM	Aug	
30	2012	EnerNOC to formally submit the Pre Rule Change Proposal: Relevant Demand for a Demand Side Programme (PRC_2012_02) into the rule change process.	EnerNOC	Aug	Completed. EnerNOC formally submitted RC_2012_02 on 23 August 2012
31	2012	The IMO to publish Mr Mike Thomas' presentation from the half day RCMWG workshop held on 4 July 2012 on the IMO website,	IMO	Aug	Completed.

#	Year	Action	Responsibility	Meeting arising	Status/Progress
32	2012	The IMO to include a review of the WEM's governance arrangement on the list of priority issues that would require further consideration by the PUO before being incorporate into the MREP	IMO	Aug	Completed.
33	2012	MAC members to review the Market Rules Evolution Plan issues list and provide the IMO with details of any additional items for inclusion on the list by Wednesday, 15 August 2012	MAC	Aug	Completed
34	2012	The IMO to send out the final Market Rules Evolution Plan list of issues and a copy of the prioritisation ballot form for MAC members to complete.	IMO	Aug	Completed. The MREP was provided to MAC members for prioritisation on 21 August 2012
35	2012	The PUO to consider the issue of incentivising early entry of capacity and provide the MAC with details on the next steps in the process for addressing the issue from a policy perspective at the September 2012 MAC meeting	PUO	Aug	

Agenda Item 5a: Overview of Market Rule Changes

Below is a summary of the status of Market Rule Changes that are either currently being progressed by the IMO or have been registered by the IMO as potential Rule Changes to be progressed in the future.

Rule changes: Formally submitted (see appendix 1)	5th September 2012
Fast track with Consultation Period open	0
Standard Rule Changes with 1st Submission Period Open	4
Fast Track Rule Changes with Consultation Period Closed (final report being prepared)	0
Standard Rule Changes with 1st Submission Period Closed (draft report being prepared)	2
Standard Rule Changes with 2nd Submission Period Open	0
Standard Rule Changes with 2nd Submission Period Closed (final report being prepared)	0
Rule Changes - Awaiting Minister's Approval and/or Commencement	1
Total Rule Changes Currently in Progress	**7**

Potential changes logged by the IMO- Not yet formally submitted	July	August
High Priority (to be formally submitted in the next 3/6 months)	1 (+1/-0)	0 (+1/-2)
Medium Priority (may be submitted in the next 6/12 months)	20 (+0/-0)	22 (+3/-1)
Low Priority (may be submitted in the next 12/18 months)	25 (+3/-0)	25 (+1/-1)
Potential Rule Changes (H, M and L)	**46**	**47**

The changes in the rule change issues log from July to August are outlined below:

Priority	Issue
High	**In:** • Settlement Tolerance: Under the current Market Rules it is possible for a Market Participant to generate away from the dispatch amount by an amount (MWh) which is greater than the Settlement Tolerance but less than the Tolerance Range or relevant Facility Tolerance Range (the "dispatch tolerance"). This provides ability for a Market Participant to be compliant with the Dispatch Instructions issued to them by System Management under clause 7.10.2 while being able to receive out of merit payments. The IMO considers this is inconsistent with the design of out of merit payments (as implemented under RC_2011_10). The IMO proposes to amend the Settlement Tolerance to be equal to the MWh equivalent of the dispatch tolerance. **Out:** • Settlement Tolerance (refer above for description of the issue): This issue has been included on the agenda for discussion at today's meeting. Refer to CP_2012_03 • Commissioning: The IMO has identified that under the new balancing market design the current restrictions of four months for commissioning of new generating system is no longer plausible or appropriate. The removal under the new Balancing market of the ability for a new generating system to make a commercial decision to commission directly in the energy market means that after the four month commissioning period a Facility which still needs to undertake any commissioning activities will be unable to do so. A Market Participant in this situation will be exposed to the potential application of Civil Penalties if they undertake commissioning activities without having an approved Commissioning Test. The IMO considers it is not appropriate to leave these facilities without a mechanism to finish their required tests and enter the market. Further given the fundamental shift in the market's approach to ensuring that a Facility adheres to its Resource Plan the IMO does not consider the four month restriction on the Commissioning Test Period for a new generating system continues to be warranted This issue has been included on the agenda for discussion at today's meeting. Refer to RC_2012_15
Medium	**In:** • Minimum TES calculation: Clauses 6.15.2(a)(i)(2) and

	6.15.2(c)(i)(2) describe a component of the Minimum Theoretical Energy Schedule (TES) calculation for a Scheduled Generator Balancing Facility or the Verve Energy Balancing Portfolio respectively, that must be included if its SOI Quantity is above the total MW quantity offered at less than the Balancing Price (i.e. the bottom of the marginal tranche). Currently clause 6.15.2(a)(i)(2) refers to "...the sum of quantities in the Facility's Balancing Price-Quantity Pairs which have a Loss Factor Adjusted Price less than or equal to the Balancing Price...". This should read "less than" rather "less than or equal to", to allow for situations where the SOI Quantity is within the marginal tranche. A similar error exists in clause 6.15.2(c)(i)(2) for the Verve Energy Balancing Portfolio**.** • Tolerance Range: Clause 2.13.6D requires System Management to develop a Tolerance Range to apply to all facilities for the purposes of System Management's reporting of alleged breaches of clauses 7.10.1 and 3.21 to the IMO. Likewise clause 2.13.6E allows System Management to determine a Facility Tolerance Range to apply in the place of the Tolerance Range for a specific Facility. The Tolerance Range determined by System Management utilises the standard formula outlined in the Power System Operation Procedure: Monitoring and Reporting. The treatment of the Verve Energy Balancing Portfolio with respect to the determination of a "dispatch tolerance" however differs to that applied for IPP Facilities and Verve Energy Stand Alone Facilities. In particular clause 7.6A.4(c) sets a dispatch non-compliance tolerance for an individual Facility in the Verve Energy Balancing Portfolio of 10MW. The IMO does not consider that there is any reason why Facilities in the Verve Energy Balancing Portfolio should be treated differently to IPP Facilities or Verve Energy Stand Alone Facilities. Further the IMO considers it inappropriate to "hard wire" a tolerance level for each of the Facilities within the Verve Energy Balancing Portfolio as the 10MW tolerance does not necessarily appropriately reflect the likely operational characteristics of that Facility. • Certification: When assigning Certified Reserve Capacity to a Facility the IMO applies the principle that the Certified Reserve Capacity of a generating system (other than an Intermittent Generator) must not exceed the unconstrained level of network access as provided under clause 4.10.1(bA). The IMO notes that during the 2012 certification process the situation arose where a network connection was shared between two facilities, where one was an Intermittent Generator. In this circumstance the Scheduled Generator's certification was capped to its Declared Sent Out Capacity (DSOC) as reflected in the participants connection agreement however the Intermittent Generator Relevant Level was not capped at the DSOC. As a result the total level of certification at the

	connection point for the two generators exceeded the DSOC of that connection point. The IMO considers that the principle of certification not exceeding the unconstrained level of network access of the Facility should apply to all Market Generators so as to ensure that the correct level of available capacity from a Facility is determined. **Out:** • Tolerance Range (refer to the description of the issue above): This issue has been included on the agenda for discussion at today's meeting. Refer to CP_2012_03
Low	**In:** • Cancellation of Reserve Capacity Auction: Clause 4.15.1 refers to situations when the Reserve Capacity Auction (RCA) must be cancelled. It contemplates two situations: 1. No Certified Reserve Capacity it to be made available in the RCA; or 2. The IMO considers that the Reserve Capacity Requirement for that Reserve Capacity Cycle will be met without an auction For assessment of Situation 1, this clause refers to information provided under clauses 4.14 and 4.28C. The reference to clause 4.28C is incorrect as it refers to Early Certified Reserve Capacity (ECRC), which is prohibited from use in the RCA (clause 4.28C.14(a)). Also clause 4.28C.4 specifies that all Certified Reserve Capacity pertaining to ECRC must be traded bilaterally. The assessment in Situation 2 contemplates that ECRC declared under clause 4.28C will form a part of the IMO's assessment of the Reserve Capacity Requirement being met. Therefore, the reference to clause 4.28C should appropriately occur in Situation 2. **Out:** • Clarification of obligations relating to dispatch: Clause 7.10.6A and 7.10.7 refer to 'a request under 7.10.5'. Previously, this meant System Management requesting a generator to cease its non-compliant behaviour. This piece of 7.10.5 has been removed, and the only remaining request is for an explanation of the deviation. 7.10.6A and 7.10.7 don't appear to have been updated for this, with the result that 7.10.6A asks for an explanation of why they cannot provide an explanation, and 7.10.7 would appear to exempt System Management from telling the IMO about the deviation if the Market Participant has provided an explanation. This issue has been included on the agenda for discussion at today's meeting. Refer to CP_2012_03.

The IMO also notes that it keeps a log of Minor and Typographical issues and Rule Change Suggestions that is updated on a regular basis. The Issues contained within the Minor and Typographical Log are collated and submitted in batches during the year. Rule Change Suggestions contained on the IMO's log form the basis for the Market Rules Evolution Plan.

APPENDIX 1: FORMALLY SUBMITTED RULE CHANGES (Current as of 5th September 2012)

Standard Rule Change with First Submission Period Open

ID	Date submitted	Title	Submitter	Next Step	Date
RC_2012_02	03/09/2012	Relevant Demand of a Demand Side Program	EnerNOC	Submissions Close	16/10/2012
RC_2012_09	27/07/2012	Clarification and Calculation of Availability Curve	System Management	Submissions close	07/09/2012
RC_2012_11	30/07/2012	Transparency of Outage Information	IMO	Submissions close	10/09/2012
RC_2012_12	25/07/2012	Updates to Commissioning Test Plans	IMO	Submissions close	05/09/2012

Standard Rule Change with First Submission Period Closed

ID	Date submitted	Title	Submitter	Next Step	Date
RC_2011_09	15/05/2012	Prudential Requirements	IMO	Draft Rule Change Report Published	21/09/2012
RC_2012_10	22/06/2012	Limits to Early Entry Capacity Payments	Synergy	Submissions Close	17/09/2012

Standard Rule change Awaiting Commencement

ID	Date submitted	Title	Submitter	Next Step	Date
RC_2011_02	10/03/2011	Reassessment of Allowable Review during a Review Period	ERA	Commencement	01/11/2012

Wholesale Electricity Market
Pre Rule Change Proposal

Change Proposal No: PRC_2012_07
Received date: TBA

Change requested by

Name:	Suzanne Frame
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Organisation:	IMO
Address:	Level 3 Governor Stirling Tower, 197 St Georges Tce, Perth 6000
Date submitted:	TBA
Urgency:	Medium
Change Proposal title:	Loss Factor Determination
Market Rules affected:	2.27.1, 2.27.1A, 2.27.2, 2.27.2A, 2.27.3, 2.27.3A, 2.27.3B, 2.27.4, 2.27.5, 2.27.6, 2.27.7(new), 2.27.8(new), 2.27.9(new), 2.27.10(new), 2.27.11(new), 2.27.12(new), 2.27.13(new), 2.27.14(new), 2.27.15(new), 2.27.16(new), 2.27.17(new), 9.3.4A and the Glossary.

Introduction

Clause 2.5.1 of the Wholesale Electricity Market Rules (Market Rules) provides that any person (including the Independent Market Operator (IMO)) may make a Rule Change Proposal by submitting a completed Rule Change Proposal form to the IMO.

This Rule Change Proposal can be posted, faxed or emailed to:

Independent Market Operator
Attn: Group Manager, Market Development
PO Box 7096
Cloisters Square, Perth, WA 6850

Fax: (08) 9254 4339
Email: market.development@imowa.com.au

The IMO will assess the proposal and, within five Business Days of receiving this Rule Change Proposal form, will notify you whether the Rule Change Proposal will be further progressed.

In order for the proposal to be progressed, all fields below must be completed and the proposal must explain how it will enable the Market Rules to better contribute to the achievement of the wholesale electricity market objectives. The objectives of the market are:

(a) to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system;

(b) to encourage competition among generators and retailers in the South West interconnected system, including by facilitating efficient entry of new competitors;

(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;

(d) to minimise the long-term cost of electricity supplied to customers from the South West interconnected system; and

(e) to encourage the taking of measures to manage the amount of electricity used and when it is used.

Details of the proposed Market Rule Change

1. Describe the concern with the existing Market Rules that is to be addressed by the proposed Market Rule change:

Background

As electricity flows through the transmission and distribution networks energy is lost due to electrical resistance and the heating of conductors. Energy losses on the network must be factored in at all stages of electricity production and transport, to ensure the delivery of adequate supply to meet prevailing demand and to keep the power system in balance.

While system losses can be measured in total, the actual losses of any specific user cannot easily be measured. Therefore Loss Factors are used to allocate system losses to users in as equitable a manner as possible. Under the Wholesale Electricity Market (WEM) Rules (Market Rules), each generator or load is assigned a static Loss Factor, which notionally represents the average marginal losses between the Facility and a fixed Reference Node at Muja. Multiplying the metered output or consumption of a Facility by its Loss Factor produces a “loss adjusted” quantity corresponding to the equivalent generation or consumption at the Reference Node.

Settlement of the Short Term Energy Market (STEM) and Balancing Market is based on loss adjusted energy quantities. For example, the metered consumption of a Load is typically inflated by its Loss Factor, to reflect the actual generation required to service the Load including system losses. Similarly, generation offers submitted to these markets are loss adjusted, to reflect the variation in system losses associated with generation at different locations in the South West interconnected system (SWIS).

Loss Factors are determined by the responsible Network Operator and provided to the IMO for publication and use in market operations. Currently Western Power is the Network

Operator for all connection points in the SWIS for which Loss Factors are required. The Loss Factors must be recalculated and provided to the IMO each year by 1 June. A Market Participant may apply to the IMO for a reassessment of a Loss Factor if the Market Participant believes the Loss Factor has been calculated incorrectly.

A Loss Factor incorporates both transmission and distribution system losses and is expressed as the product of a Transmission Loss Factor and a Distribution Loss Factor. Since market start, Facility specific Loss Factors have been calculated for Registered Facilities and some of the largest Loads. Various average Loss Factors have been calculated for other interval metered Loads; these Loss Factors are assigned to the Loads in accordance with a classification system that considers a range of factors such as network tariff and substation. The Notional Wholesale Meter has been assigned the product of the system wide average Loss Factors calculated for Western Power's transmission and distribution systems.

Section 2.27 of the Market Rules outlines the requirements for the determination of Loss Factors in the WEM. Clause 2.27.6 requires the IMO to document, in "the Market Operations Procedure", the standards, methodologies and procedures that must be used by Network Operators in determining the Loss Factors.

A detailed document titled "Market Procedure for Determining Loss Factors" was developed and published in 2006 with input from Western Power, and has not been changed since that time[1]. This document details the methodology to be used by the Network Operator to calculate Transmission and Distribution Loss Factors.

The IMO has identified a number of discrepancies between section 2.27 of the Market Rules, the Market Procedure for Determining Loss Factors and current practice. This Rule Change Proposal, which has been developed in consultation with Western Power, seeks to resolve these discrepancies in a way that promotes the efficiency and transparency of the Loss Factor determination process.

The IMO also proposes to make a number of amendments to the Market Procedure for Determining Loss Factors, to ensure that the Market Rules and the Market Procedure are fully aligned and to address some issues specific to the Market Procedure.

The IMO notes that, apart from the proposed changes to the calculation of the Notional Wholesale Meter Distribution Loss Factor and the removal of the requirement to provide Loss Factors for non-interval metered Loads, this Rule Change Proposal does not seek to change current practices for the determination and provision of Loss Factors.

[1] Available: http://www.imowa.com.au/f711,715493/Loss_Factor_Procedure.pdf

Issue 1: Calculation and Publication of Loss Factors

The current Market Rules are unclear about how Loss Factors must be published and how frequently the Loss Factor for a particular connection point may change. For example, it could be inferred from section 2.27 that:

- a Network Operator must provide to the IMO a Loss Factor (i.e. a number value) for each and every connection point on its network at which a relevant Facility is connected (clause 2.27.1);
- the IMO must publish the Loss Factor for each of the hundreds of thousands of relevant connection points on the Market Website (clause 2.27.3); and
- the Loss Factor for a specific connection point can only be changed through the annual review process under clause 2.27.1 or a reassessment under clause 2.27.4(d).

The actual practice since market start has been different to that described above.

- Western Power assigns a Transmission Loss Factor Code and a Distribution Loss Factor Code to each connection point in its network, in accordance with the classification system described in the Market Procedure for Determining Loss Factors. Each code identifies a group of connection points that will be assigned the same Transmission Loss Factor or Distribution Loss Factor. While some groups consist of a single connection point (e.g. a Scheduled Generator) others contain many thousands of connection points (e.g. for residential customers).
- By 1 June each year Western Power recalculates the Loss Factors for its network and provides the IMO with updated Transmission and Distribution Loss Factors for each Transmission Loss Factor Code and Distribution Loss Factor Code (rather than for each connection point). The IMO publishes each code and its new value on the Market Web Site.
- The Loss Factor for a connection point is calculated as the product of the Transmission Loss Factor for its assigned Transmission Loss Factor Code and the Distribution Loss Factor for its assigned Distribution Loss Factor Code.
- Western Power may update the Transmission or Distribution Loss Factor Code of a connection point at any time, if there is a change to any of the characteristics that determine these codes under the classification system (e.g. network tariff). This means that the Loss Factor for a particular connection point can change at any time, even though the Transmission and Distribution Loss Factors for each code are usually only updated on an annual basis.
- Western Power provides the IMO with the Transmission and Distribution Loss Factor Codes for each connection point, whenever they are set or modified. The IMO does not however publish this information, which is provided by Western Power to Market Participants for their connection points directly.

The IMO considers that the current practice is more efficient than the one implied by the current Market Rules, as it allows for Loss Factors to be updated more dynamically if there are significant changes to connection points and avoids unnecessary double handling in the provision of Loss Factors to Market Participants.

Proposal:

The IMO proposes a number of amendments to section 2.27 to remove ambiguity and clarify the process for providing Loss Factors to the IMO and Market Participants. The proposed amendments will bring the Market Rules into alignment with current practice.

Issue 2: Loss Factors for Non-Dispatchable Loads

A number of discrepancies exist between the Market Rules, the Market Procedure and current practice regarding the determination of Loss Factors for Non-Dispatchable Loads.

Non-Dispatchable Loads between 1000 kVA and 7000 kVA peak consumption: Currently clause 2.27.2(e)(vi) requires the calculation of a specific Loss Factor for each Non-Dispatchable Load above 1000 kVA peak consumption. This conflicts with the Market Procedure and current practice, where in general individual Loss Factors are only calculated for:

- transmission connected Loads;
- distribution connected Loads above 7000 kVA peak consumption; and
- distribution connected Loads between 1000 kVA and 7000 kVA peak consumption that are more than 10 km from the associated substation.

In some (but not all) cases a Market Participant may request the calculation of an individual Distribution Loss Factor for a distribution connected, Non-Dispatchable Load between 1000 kVA and 7000 kVA that is less than 10 km from the associated substation, but the Market Participant is required to pay for this calculation.

Western Power has advised the IMO that the current practice appears to produce a more appropriate outcome than the practice prescribed in the Market Rules. There are approximately 400 Non-Dispatchable Loads with a measured[2] demand over 1000 kVA in the SWIS. Western Power has estimated that it would cost over $0.5 million per year to calculate individual Loss Factors for all of these Loads, a cost that would ultimately be passed on to the market through network tariffs. Under the present system only around 100 are calculated, at a much reduced cost.

A comparison with the National Electricity Market indicates that the 1000 kVA threshold appears to be low. The corresponding threshold in the NEM is set at either 10 MW peak demand or 40 GWh annual consumption. A customer whose load does not meet these thresholds may request a site specific Distribution Loss Factor, provided it meets the reasonable costs incurred by the distribution business.

Western Power has advised the IMO of its view that individually calculating a Loss Factor for each of the Loads in this peak demand range would not lead to a material improvement in the overall accuracy of the Loss Factors.

Non-Dispatchable Loads below 1000 kVA peak consumption: Clause 2.27.2(f) requires "the same" Loss Factor to apply to all Non-Dispatchable Loads with less than 1000 kVA peak consumption, where this Loss Factor is to be determined "on an averaged basis". However, under the Market Procedure the Transmission and Distribution Loss Factors for these Loads

[2]Additional Loads in this peak demand range may exist, as connection points on some Western Power services may not have sufficiently accurate metering to determine an exact peak demand.

will vary depending on a number of factors, including the network tariff for the connection point and whether it is an exit or entry point.

Since the market commenced in 2006 Western Power has generally followed the Market Procedure rather than clause 2.27.2(f) when calculating Loss Factors for these Non-Dispatchable Loads. The methodology outlined in the Market Procedure was originally developed by Western Power and the IMO considers it provides a more accurate allocation of losses across the various types of network users than the single average value prescribed in the Market Rules.

The IMO notes, however, that several issues exist with the methodology outlined in the Market Procedure (which for example requires the calculation of specific Distribution Loss Factors for each Entry Point). The IMO proposes to address these issues in its proposed revised Market Procedure for Determining Loss Factors, to be considered by industry concurrently with this Rule Change Proposal.

Notional Wholesale Meter: Clause 2.27.2A requires the Loss Factor for the Notional Wholesale Meter to be the same as the Loss Factor for Non-Dispatchable Loads below 1000 kVA peak consumption described in clause 2.27.2(f). As mentioned above, there is currently no single Loss Factor applicable to Non-Dispatchable Loads below 1000 kVA peak consumption. Further, the Market Procedure describes the Loss Factor that is to apply to a Notional Wholesale Meter as being "the Transmission System system-wide average Loss Factor multiplied by the Distribution System system-wide average Loss Factor".

Loss Factors for Loads with and without interval meters: Clause 2.27.1(c) requires that Network Operators provide to the IMO Loss Factors for all Non-Dispatchable Loads. However, the Loss Factors provided for Non-Dispatchable Loads without interval meters are not used by the IMO as the consumption for these Loads is settled as part of the Notional Wholesale Meter, and so these Loss Factors do not actually need to be provided.

Further, the IMO notes that under the current Market Procedure the calculation of the Distribution Loss Factor for the Notional Wholesale Meter considers average losses over all connection points, not just the basic and unmetered Loads that are settled as part of the Notional Wholesale Meter.

Proposal:
Following discussions with Western Power the IMO proposes the following amendments to the Loss Factor requirements for Non-Dispatchable Loads:

- increase the minimum peak consumption level for which a specific Loss Factor must be calculated from 1000 kVA to 7000 kVA, in line with current practice;
- remove the requirement for all Non-Dispatchable Loads under 1000 kVA peak consumption to have the same Loss Factor;
- clarify that connection points (and in particular Non-Dispatchable Loads) are assigned to Transmission and Distribution Loss Factor Classes according to a classification system prescribed for each Network Operator in the Market Procedure, and that the classification is based on characteristics indicative of the expected transmission or distribution system losses for a connection point;
- clarify the requirements for the Transmission and Distribution Loss Factors for the Notional Wholesale Meter, where:

- the Transmission Loss Factor represents system wide average losses over Western Power's transmission system (unchanged from current practice); and
- the Distribution Loss Factor represents the average losses incurred over Western Power's distribution system by Non-Dispatchable Loads not equipped with an interval meter; and

- remove the requirement for Network Operators to provide Loss Factors for Non-Dispatchable Loads without interval meters.

It should be noted that in conjunction with this Rule Change Proposal the IMO proposes to amend the Market Procedure for Determining Loss Factors to:

- remove details relating to the requirement to determine Loss Factor Classes for Non-Dispatchable Loads without interval meters;
- refine the methodology for calculating the Distribution Loss Factor for the Notional Wholesale Meter, to exclude consideration of interval metered connection points; and
- clarify the treatment of small Entry Points.

Minor Amendments

The IMO also proposes the following minor amendments to improve the clarity of the Market Rules.

Clause	Issue	Proposed solution
2.27.2	Clause 2.27.2(b) states that "Loss Factors must represent the marginal losses for a connection point relative to the Reference Node, averaged over all Trading Intervals in a year, weighted by the absolute value of the net demand at that connection point during the Trading Interval". This statement is not reflective of Distribution Loss Factors which represent average losses over the distribution system, consistent with the approach taken to determine Distribution Loss Factors in the NEM.	Modify the drafting to clarify the differences between Transmission and Distribution Loss Factors.
2.27.2A, Glossary	Currently the Market Rules contain conflicting references to the term "Notional Wholesale Meter". For example, clause 2.27.2A refers to "where a Loss Factor must be applied to a Notional Wholesale Meter", while clause 9.3.4A describes the process for determining a single Metered Schedule for "the" Notional Wholesale Meter, to account for "those Non-Dispatchable Loads without interval meters or with meters not read as interval meters that are served by Synergy". Under the current market arrangements only Synergy can supply Non-Dispatchable Loads without interval meters, and this is reflected in the way in which non-interval metered consumption is allocated to Synergy under the	Amend the relevant clauses to clarify that: • there is only one Notional Wholesale Meter, which represents those Non-Dispatchable Loads without interval meters or with meters not read as interval meters that are served by Synergy; and • Western Power is responsible for determining the Loss Factors to apply to the Notional Wholesale Meter.

	Market Rules.	
2.27.6	Clause 2.27.6 provides the heads of power for the Market Procedure for Determining Loss Factors, but refers to the Market Procedure as the "Market Operations Procedure".	Amend the name of the Market Procedure in this clause so that it is consistent with the current Market Procedure and provides an appropriately descriptive and useful title.
2.27.6	The heads of power in clause 2.27.6 refers only to Network Operators, implying that only Network Operators are obliged to comply with the Market Procedure. The Market Procedure, however, also describes a number of activities undertaken by the IMO and Market Participants. The IMO notes that clauses 2.9.6, 2.9.7 and 2.9.8 of the Market Rules require the IMO, System Management and other Rule Participants respectively to comply with any Market Procedures applicable to them. As such, the IMO does not consider it necessary for heads of power clauses such as clause 2.27.6 to list explicitly the Rule Participants required to comply with a Market Procedure.	Delete from clause 2.27.6 the explicit statement requiring Network Operators to comply with the Market Procedure.
2.27.6	As currently drafted, clause 2.27.6 does not reflect the important role of Network Operators in developing and maintaining the Market Procedure for Determining Loss Factors.	Update the clause to emphasise the involvement of Network Operators in developing this Market Procedure.

The IMO has also made some minor typographical corrections and renumbered the clauses in section 2.7 to improve the integrity of this section.

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2. Explain the reason for the degree of urgency:

The IMO proposes that this Rule Change Proposal be progressed through the Standard Rule Change Process.

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3. Provide any proposed specific changes to particular Rules: (for clarity, please use the current wording of the Rules and place a ~~strikethrough~~ where words are deleted and underline words added)

2.27.1. ~~By 1 June of each year~~ Network Operators must, in accordance with this section 2.27, calculate and provide to the IMO Loss Factors for:

(a) each connection point in their Networks at which any of the following is connected:

i. a Scheduled Generator;

ii. a Non-Scheduled Generator;

iii. a Non-Dispatchable Load equipped with an interval meter;

iv. an Interruptible Load; or

v. a Dispatchable Load; and

(b) in the case of Western Power, the Notional Wholesale Meter.

~~(a) a Scheduled Generator;~~

~~(b) a Non-Scheduled Generator;~~

~~(c) a Non-Dispatchable Load;~~

~~(d) an Interruptible Load; or~~

~~(e) [Blank]~~

~~(f) a Dispatchable Load.~~

2.27.2~~1A~~. A Market Participant may request, during the process of obtaining a relevant Arrangement for Access, that the relevant Network Operator determine and provide to the IMO~~,~~ Loss Factors to apply to a ~~facility or a Non-Dispatchable Load~~ Facility where there are no Loss Factors applying to the connection point at which the ~~facility or the Non-Dispatchable Load~~ Facility will be connected.

2.27.3. Loss Factors must reflect transmission and distribution losses and each Loss Factor must be expressed as the product of a Transmission Loss Factor and a Distribution Loss Factor.

2.27.4. Subject to clause 2.27.5(d), for each Network Operator the IMO must, in consultation with that Network Operator, develop a classification system to assign each of the connection points in the Network Operator's network identified under clause 2.27.1(a) to a Transmission Loss Factor Class and a Distribution Loss Factor Class, where:

(a) the assignment of a connection point to a Loss Factor Class is based on characteristics indicative of the expected transmission or distribution system losses (as applicable) for the connection point;

(b) each connection point in a Loss Factor Class is assigned the same Transmission Loss Factor or Distribution Loss Factor (as applicable); and

(c) connection points on the transmission system are assigned to a Distribution Loss Factor class with a Distribution Loss Factor equal to one.

2.27.5~~2~~. In calculating Loss Factors, Network Operators must apply the following principles:

~~(a) Loss Factors are static and apply to each connection point until new Loss Factors are calculated in accordance with clause 2.27.1 or 2.27.4(d);~~

(~~b~~a) Transmission Loss Factors must notionally represent the marginal transmission system losses for a connection point relative to the Reference Node, averaged over all Trading Intervals in a year, weighted by the absolute value of the net demand at that connection point during the Trading Interval;

(b) Distribution Loss Factors must notionally represent the average distribution system losses for a connection point over a year;

(c) Loss Factors must be calculated using:

i. generation and load meter data from the preceding 12 months; or

~~i~~Aii. for a new ~~facility or a Non-Dispatchable Load~~ Facility, any other relevant data provided to the Network Operator by the Market Participant and as agreed with the Network Operator and the IMO~~,~~; and

iii. for Transmission Loss Factors, an appropriate network load flow software package; ~~and~~

~~(d) Loss Factors must include transmission and distribution losses;~~

(~~e~~d) a specific Loss Factor must be calculated for each:

i. Scheduled Generator;

ii. Non-Scheduled Generator;

~~iii. [Blank]~~

~~iv~~ii. Interruptible Load;

iv. Dispatchable Load; and

v~~i~~. Non-Dispatchable Load above ~~1000kVA~~ 7000 kVA peak consumption;

(f~~e~~) ~~the same Loss Factor will apply to all Non-Dispatchable Loads less than 1000kVA peak consumption, and will be determined on an averaged basis.~~Western Power must assign the Notional Wholesale Meter to:

i. a Transmission Loss Factor Class that represents system wide average losses over Western Power's transmission system; and

ii. a Distribution Loss Factor Class that represents the average losses incurred over Western Power's distribution system by Non-Dispatchable Loads not equipped with an interval meter; and

(f) the Transmission Loss Factors calculated for each Transmission Loss Factor Class and the Distribution Loss Factors calculated for each Distribution Loss Factor Class are static, and apply to each connection point in the relevant Loss Factor Class until the time published by the IMO

under clause 2.27.8 for the application of an updated Transmission Loss Factor or Distribution Loss Factor to that Loss Factor Class.

2.27.~~2A~~6. ~~For the purpose of these Market Rules, where a Loss Factor must be applied to a Notional Wholesale Meter value then the loss factor described in clause 2.27.2(f) is to apply.~~Each year by 1 June each Network Operator must, in accordance with the Market Procedure for Determining Loss Factors, recalculate the Loss Factors for its connection points and provide the IMO with updated Transmission Loss Factors and Distribution Loss Factors (as applicable) for each Loss Factor Class in the Network Operator's classification system.

2.27.~~3~~7. The IMO must publish the ~~Loss Factors~~ Transmission Loss Factors and Distribution Loss Factors as soon as practicable after receiving them from all Network Operators.

2.27.~~3A~~8. ~~Once all~~ When Transmission Loss Factors and Distribution Loss Factors are published in accordance with clause ~~2.27.3~~ 2.27.7 or where one or more Transmission Loss Factors or Distribution Loss Factors are changed in accordance with clauses ~~2.27.4(e)~~ 2.27.15(e) or ~~2.27.5~~ 2.27.16 the IMO must publish the time from which the ~~Loss Factor or~~ new Transmission Loss Factors or Distribution Loss Factors will apply, where this must be from the commencement of a Trading Day.

2.27.~~3B~~9. In setting the time from which a Transmission Loss Factor or Distribution Loss Factor ~~or Loss Factors~~ will apply in accordance with clause ~~2.27.3A~~ 2.27.8 the IMO must allow sufficient time for Market Participants to identify and update Standing Data that is dependent on Loss Factors.

2.27.10. A Network Operator must develop new Loss Factor Classes if required to implement the classification system prescribed by the IMO for that Network Operator. If a Network Operator develops a new Loss Factor Class then it must:

(a) calculate the initial Transmission Loss Factor or Distribution Loss Factor (as applicable) for the new Loss Factor Class in accordance with the Market Procedure for Determining Loss Factors; and

(b) provide to the IMO details of the new Loss Factor Class and its initial Transmission Loss Factor or Distribution Loss Factor as soon as practicable but in any event before a connection point is assigned to the new Loss Factor Class.

2.27.11. The IMO must publish a new Transmission Loss Factor or Distribution Loss Factor provided by a Network Operator in accordance with clause 2.27.10(b) as soon as practicable after receiving it from the Network Operator.

2.27.12. A Network Operator must determine the Transmission Loss Factor Class and Distribution Loss Factor Class for each new connection point in its Network identified under clause 2.27.1(a), in accordance with the classification system prescribed by the IMO for that Network Operator.

2.27.13. A Network Operator must re-determine the Loss Factor Classes for a connection point in its network identified under clause 2.27.1(a) if a change occurs to the connection point that might alter its applicable Loss Factor Classes under the classification system prescribed by the IMO for that Network Operator.

2.27.14. When a Network Operator determines a Loss Factor Class for a connection point under clause 2.27.12 or changes a Loss Factor Class for a connection point under clause 2.27.13, the Network Operator must provide to both the IMO and the relevant Market Participant the new Loss Factor Class for the connection point and the Trading Day from which it takes effect, as soon as practicable but in any event before the information must be used in any calculations under these Market Rules.

2.27.15~~4~~. A Market Participant may apply to the IMO for a ~~re-assessment~~ reassessment of any Transmission Loss Factor or Distribution Loss Factor applying to a Scheduled Generator, Non-Scheduled Generator, Interruptible Load, Dispatchable Load or Non-Dispatchable Load registered to that Market Participant. The following process will apply to every application~~:~~.

(a) ~~the~~ The Market Participant must apply to the IMO in writing within 15 Business Days of receiving the notification of the relevant Loss Factor~~s~~, stating the Transmission Loss Factor or Distribution Loss Factor~~s~~ that it believes to be in error and its reasons for believing that the Transmission Loss Factor or Distribution Loss Factor~~s~~ should take some other value~~;~~.

(b) ~~upon~~ Upon receiving such an application, the IMO must:

i. within two Business Days notify the relevant Network Operator that the IMO intends to carry out an audit of the Loss Factor calculation; and

ii. within 25 Business Days conduct an audit of the Loss Factor calculation.

(c) ~~the~~ The relevant Network Operator must cooperate with the audit of the Loss Factor calculation by providing reasonable access to the data and calculations used in producing the Loss Factor.

(d) Where the audit reveals an error in the ~~Loss Factor~~ calculation of a Transmission Loss Factor or Distribution Loss Factor for a Loss Factor Class, the IMO must direct the Network Operator to recalculate the Transmission Loss Factor or Distribution Loss Factor, and may instruct the

Network Operator to recalculate other Transmission Loss Factors or Distribution Loss Factors provided by that Network Operator.

(e) Where the IMO directs the Network Operator to recalculate a Transmission or Distribution Loss Factor for a Loss Factor Class, then the Network Operator must do so, and must provide the recalculated Transmission Loss Factor or Distribution Loss Factor to IMO. The recalculated Transmission Loss Factor or Distribution Loss Factor is substituted for the value previously applied with effect from the time published by the IMO in accordance with clause ~~2.27.3A~~ 2.27.8.

(f) Where the audit reveals an error in the assignment of a connection point to a Loss Factor Class, the IMO must direct the relevant Network Operator to correct the error and re-determine the Loss Factor Class for the connection point in accordance with the classification system prescribed by the IMO for that Network Operator.

(g) Where the IMO directs a Network Operator to re-determine a Loss Factor Class for a connection point, then the Network Operator must do so, and must as soon as reasonably practicable provide to the IMO and the relevant Market Participant the revised Loss Factor Class and the Trading Day from which it should apply.

2.27.~~5~~16. Where a Network Operator fails to provide the IMO with a Transmission Loss Factor or Distribution Loss Factor in accordance with clause ~~2.27.1~~ 2.27.6 or ~~2.27.4(d)~~ 2.27.15(d), the IMO must continue to use the equivalent Transmission Loss Factor or Distribution Loss Factor from the previous year until such time as the Network Operator has provided the IMO with the new Transmission Loss Factor or Distribution Loss Factor and that Transmission Loss Factor or Distribution Loss Factor has taken effect. The recalculated Transmission Loss Factor or Distribution Loss Factor is substituted for the value previously applied with effect from the time published by the IMO in accordance with clause ~~2.27.3A~~ 2.27.8.

2.27.~~6~~17. The IMO must, with the assistance of Network Operators, document the standards, methodologies, classification systems and procedures to be used in determining ~~the~~ Loss Factors in the Market ~~Operations~~ Procedure for Determining Loss Factors ~~and Network Operators must follow that documented Market Procedure when determining the Loss Factors~~.

9.3.4A. The IMO must determine a single Metered Schedule for a Trading Interval for those Non-Dispatchable Loads without interval meters or with meters not read as interval meters that are served by Synergy where:

(a) the Metered Schedule equals the Notional Wholesale Meter value for that Trading Interval;

(b) the Notional Wholesale Meter value for a Trading Interval equals negative one multiplied by:

i. the sum of the Metered Schedules with positive quantities for that Trading Interval; plus

ii. the sum of the Metered Schedules with negative quantities for that Trading Interval;

where the Metered Schedules referred to in clauses 9.3.4A(i) and 9.3.4A(ii) exclude the Metered Schedule for the Notional Wholesale Meter.

Notional Wholesale Meter: A notional interval meter ~~quantity associated with a Market Customer's aggregate consumption not metered by Trading Interval. This value will be an estimate produced by the IMO.~~ representing Non-Dispatchable Loads without interval meters that are served by Synergy.

Distribution Loss Factor: A factor representing the average electrical energy losses incurred when electricity is transmitted through a distribution network.

Distribution Loss Factor Class: A group of one or more connection points with common characteristics assigned a common Distribution Loss Factor.

Loss Factor: Means:

(a) ~~A~~a factor representing network losses ~~defining the annual average marginal network loss~~ between any given node and the Reference Node where the Loss Factor at the Reference Node is 1, determined in accordance with clause ~~2.27.2~~ 2.27.5~~, and includes the Portfolio Loss Factor.~~; and

(b) in relation to the Verve Energy Balancing Portfolio, the Portfolio Loss Factor.

Loss Factor Class: A Transmission Loss Factor Class or a Distribution Loss Factor Class.

Transmission Loss Factor: A factor representing the average marginal losses incurred when electricity is transmitted through a transmission network.

Transmission Loss Factor Class: A group of one or more connection points with common characteristics assigned a common Transmission Loss Factor.

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4. Describe how the proposed Market Rule change would allow the Market Rules to better address the Wholesale Market Objectives:

The proposed amendments support a more accurate allocation of system losses, firstly by allowing multiple Loss Factor Classes to be defined for Non-Dispatchable Loads with less than 1000 kVA peak consumption, and secondly by refining the requirements for the Notional

Wholesale Meter's Distribution Loss Factor. The amendments also reduce unnecessary demands on Network Operators by removing the requirement to determine Loss Factors for each non-interval metered Load and to calculate a specific Loss Factor for each Non-Dispatchable Load between 1000 kVA and 7000 kVA peak consumption. As such the IMO considers that the proposed amendments promote the economically efficient production and supply of electricity in the SWIS (Wholesale Market Objective (a)).

The IMO considers that the proposed amendments are consistent with the remaining Wholesale Market Objectives and improve the clarity and integrity of the Market Rules.

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5. Provide any identifiable costs and benefits of the change:

Costs: None identified.

Benefits:

- Improves transparency around the calculation and provision of Loss Factors;
- Supports greater accuracy in the allocation of system losses;
- Improves the integrity of the Market Rules; and
- Ensures consistency between the Market Rules and Market Procedure for determining Loss Factors.

Wholesale Electricity Market
Pre - Rule Change Proposal

Change Proposal No: PRC_2012_15
Received date: TBA

Change requested by:

Name:	Suzanne Frame
Phone:	9254 4304
Fax:	9250 4399
Email:	Suzanne.frame@imowa.com.au
Organisation:	Independent Market Operator
Address:	Level 17 Governor Stirling Tower, 197 St Georges Terrace, Perth
Date submitted:	*TBA*
Urgency:	High
Change Proposal title:	Four month Commissioning Test Period for new generating systems
Market Rule(s) affected:	3.21A.7

Introduction

Market Rule 2.5.1 of the Wholesale Electricity Market Rules provides that any person (including the IMO) may make a Rule Change Proposal by completing a Rule Change Proposal Form that must be submitted to the Independent Market Operator.

This Change Proposal can be posted, faxed or emailed to:

Independent Market Operator
Attn: Group Manager, Market Development
PO Box 7096
Cloisters Square, Perth, WA 6850
Fax: (08) 9254 4339
Email: market.development@imowa.com.au

The Independent Market Operator will assess the proposal and, within 5 Business Days of receiving this Rule Change Proposal form, will notify you whether the Rule Change Proposal will be further progressed.

In order for the proposal to be progressed, all fields below must be completed and the change proposal must explain how it will enable the Market Rules to better contribute to the achievement of the wholesale electricity market objectives. The objectives of the market are:

(a) to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system;

(b) to encourage competition among generators and retailers in the South West interconnected system, including by facilitating efficient entry of new competitors;

(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;

(d) to minimise the long-term cost of electricity supplied to customers from the South West interconnected system; and

(e) to encourage the taking of measures to manage the amount of electricity used and when it is used.

Details of the proposed Market Rule Change

1. Describe the concern with the existing Market Rules that is to be addressed by the proposed Market Rule change:

Background

A Commissioning Test is a test of the ability of a generating system to operate at different levels of output reliably. Section 3.21A of the Wholesale Electricity Market (WEM) Rules (Market Rules) and the Power System Operation Procedure (PSOP): Commissioning and Testing outline the process by which Commissioning Tests are applied for, approved and conducted.

A Market Participant seeking to conduct a Commissioning Test must request permission from System Management, submitting the information required by clause 3.21A.4 ("Commissioning Test plan") to System Management for the approval of such Commissioning Tests. This includes the name and location of the facility to be tested, the Commissioning Test Period and the details of the tests to be conducted, including an indicative test program. For a new generating system that is yet to commence operation, System Management may not approve a Commissioning Test where the Commissioning Test Period is greater than four months.

The restriction to four continuous months for the commissioning of a new generating system (including a Facility that is late entering the market) was included into the Market Rules under the Rule Change Proposal: Updates to Commissioning Provisions (RC_2009_08). This ensured that new generators would not be subject to UDAP and DDAP payments if commissioning for a four month period, thereby reducing the financial risk associated with

entering the market for new facilities. The exemption applied to UDAP and DDAP payments only, with Reserve Capacity Obligations (and the potential for Capacity Cost Refunds) applying from 1 October for late commissioning new generators.

Under the new Balancing Market arrangements deviations by a Facility from its Resource Plan[1] are no longer subject to UDAP and DDAP payments. The removal of UDAP and DDAP was in response to a number of identified inefficient behaviours created by the application of these penalties and concerns over their punitive nature. Facilities are now paid the Balancing Price for deviations away from their Net Contract Positions. Those Facilities that are dispatched Out of Merit can receive Constrained On and Constrained Off Compensation. Facilities are encouraged to comply with the Dispatch Instructions issued by System Management via the IMO's compliance regime.

The new Balancing Market arrangements also require that all generating systems undertaking commissioning activities do so under an approved Commissioning Test rather than bidding directly into the Balancing Market in such a way as to enable the completion of any necessary commissioning activities[2]. The rationale for this requirement is that commissioning activities have implications for not only System Management in maintaining power system security and reliability but also on other Market Participants via the Balancing Market. The IMO considers that transparency of these commissioning activities is important for the efficient operation of the Balancing Market and ensuring that System Management can schedule sufficient Ancillary Services during each testing activity[3].

Issues

The IMO has identified that under the new Balancing Market design the current restriction of four months for the commissioning of a new generating system is no longer plausible or appropriate.

The removal under the new Balancing Market of the ability for a new generating system to make a commercial decision to commission directly in the energy market means that after the four month commissioning period a Facility that still needs to undertake any commissioning activities will be unable to do so. A Market Participant in this situation will be exposed to the potential application of Civil Penalties if they undertake commissioning activities without having an approved Commissioning Test.

The IMO considers it inappropriate to leave new generating systems without a mechanism under the Market Rules to finish their required commissioning activities and enter the market once the four month Commissioning Test window has lapsed. The result is that unless a Market Participant breaches the Market Rules and risks exposure to Civil Penalties a new generating system that requires more than four months to commission would never be able to complete its commissioning and enter the market.

Further, given the fundamental shift in the market's approach to ensuring that a Facility does not deviate from its expected output, the IMO does not consider a restriction on the

[1] A Resource Plan reflects how a Market Participant intends for each of its Facilities to meet its Net Contract Position during each Trading Interval during a Trading Day

[2] This point is also reflected in the Rule Change Proposal: Updates to Commissioning Tests (RC_2012_12)

[3] Note that in determining to make public Commissioning Test information under RC_2009_08 the IMO undertook a detailed Cost-Benefit Analysis. For further details refer to the following Market Web Site: http://www.imowa.com.au/RC_2009_08

Commissioning Test Period for a new generating system is still warranted. This is because the DDAP and UDAP penalties from which a Commissioning Test Facility was exempted no longer exist under the new Balancing Market arrangements. Instead all variations from the Market Participant's Net Contract Position are settled at the Balancing Price. Note that a Facility undertaking a Commissioning Test will be issued an Operating Instruction by System Management and therefore not be entitled to Constrained On and Constrained Off Compensation.

Proposal

The IMO proposes to remove the current restriction of four months on Commissioning Test Periods for new generating systems. This will enable new generating systems to undertake Commissioning Tests for as long as required provided System Management can accommodate the activities.

For the purposes of completeness, the IMO does not propose to change the current application of capacity refunds where a Facility is undertaking Commissioning Tests after 1 October.

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2. Explain the reason for the degree of urgency:

The IMO proposes that this Rule Change Proposal be progressed via the Standard Rule Change Process.

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3. Provide any proposed specific changes to particular Rules: (for clarity, please use the current wording of the Rules and place a ~~strikethrough~~ where words are deleted and underline words added)

3.21A.7[4]. System Management must approve a Commissioning Test Plan, unless:

(a) in its opinion inadequate information is provided in the Commissioning Test Plan; or

(b) in its opinion the conduct of the proposed activities to be undertaken at the proposed times would pose a threat to Power System Security or Power System Reliability; or

~~(c) in the case of a new generating system that is yet to commence operation, the proposed Commissioning Test Period is greater than four months; or~~

~~(d)~~(c) in its opinion inadequate time to properly consider the Commissioning Test Plan has been provided, where the request has been received less than 20

[4] Note that the proposed amendments to clause 3.21A.7 under the Rule Change Proposal: Updates to Commissioning Test Plans (RC_2012_12) have been reflected. Further changes to the underlying drafting of this clause may occur as a result of the formal rule change process for RC_2012_12.

Trading Days in advance of the start date of the proposed Commissioning Test.

4. Describe how the proposed Market Rule change would allow the Market Rules to better address the Wholesale Market Objectives:

The IMO considers that the proposed removal of the four month restriction on the Commissioning Test Period for new generating systems will enable the Market Rules, as a whole, to better address Wholesale Market Objective (a). In particular, the IMO considers that by removing the restricted timeframe for Facilities undertaking Commissioning Tests under the new Balancing Market arrangements (where Facilities may not undertake commissioning activities without having an approved Commissioning Test Plan) the safety and reliability of the production of electricity by new generating systems will be promoted. Facilities will be able to ensure all relevant commissioning activities (including those required under the Technical Rules) can be completed under an approved Commissioning Test Plan. This will remove the risk that such facilities either:

- complete their commissioning activities without System Management's advanced knowledge and approval (noting that Civil Penalties would potentially be incurred); or

- would not be available for dispatch if they have not completed the necessary commissioning activities required under the Technical Rules to obtain network access, thereby creating a "under-supply of dispatchable capacity" situation.

5. Provide any identifiable costs and benefits of the change:

Costs:

- There will be internal process changes required for System Management to reflect the removal of the restriction on their ability to approve a Commissioning Test Period for a new generating system greater than four months.

Benefits:

- Removal of an inappropriate restriction on the time period for new generating systems to undertake commissioning activities.

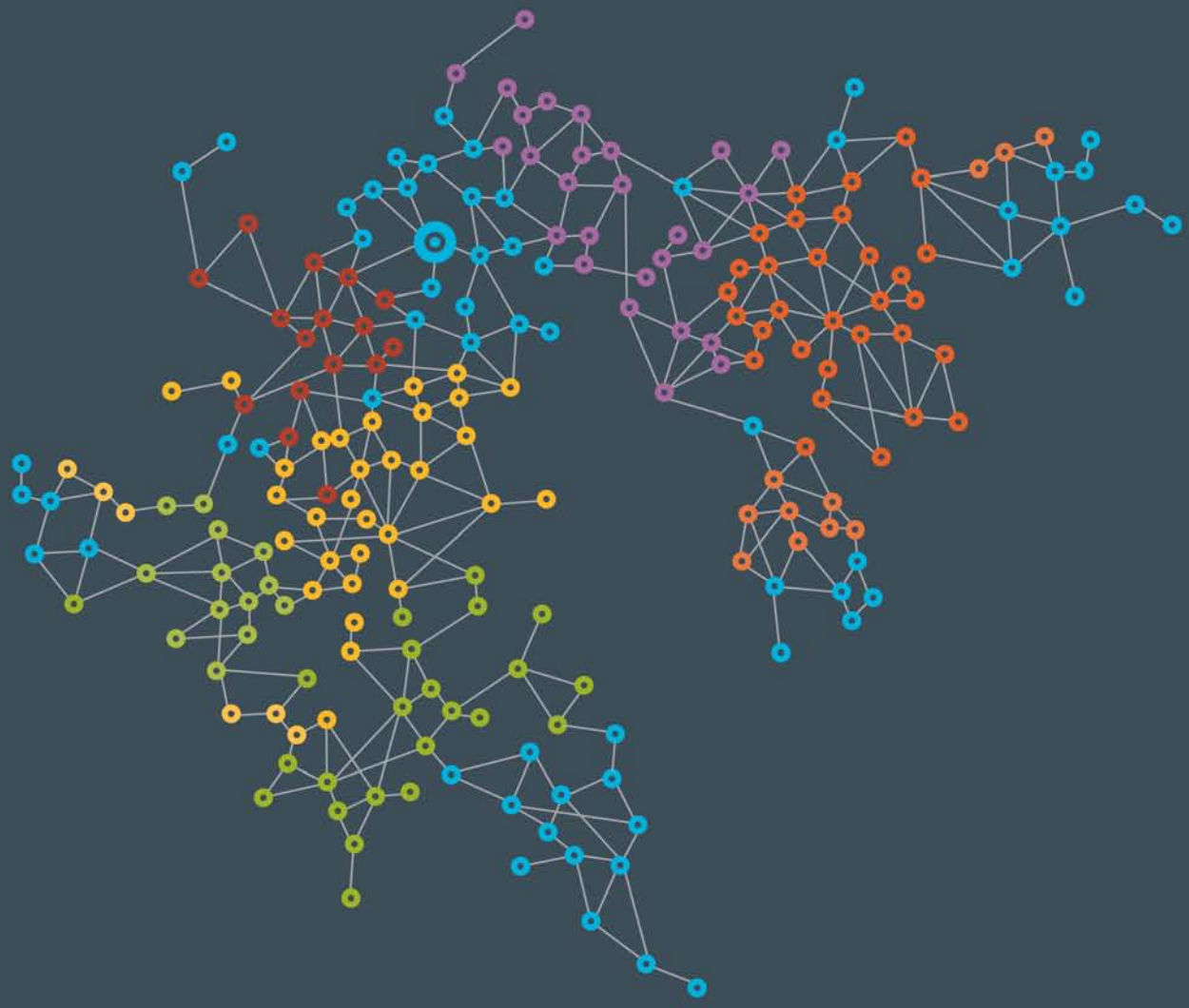
- Ensure that new generating systems that can not complete their commissioning activities within the four month window are not precluded indefinitely from entering the market and making their capacity available for dispatch.

INDEPENDENT
MARKET
OPERATOR

Discussion Paper: Dispatch Tolerance Ranges

CP_2012_03

August 2012



Contents

DOCUMENT DETAILS

IMO Notice No.: CP_2012_03
Report Title: Dispatch Tolerance Ranges
Release Status: Public
Confidentiality Status: Public domain

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1. BACKGROUND

Since the Wholesale Electricity Market (WEM) began System Management, with the knowledge of Rule Participants, has applied a tolerance range to the deviations of Scheduled Generators from their Resource Plans before reporting alleged breaches to the IMO. The adoption of a tolerance range was a practical solution to the overly stringent obligations contained within the Wholesale Electricity Market Rules (Market Rules), particularly with respect to the reporting obligations associated with clauses 7.10.1 and 7.10.5. At an operational level, adherence to the Market Rules would have required System Management to report every deviation from a Resource Plan to the IMO.

Given the identified impracticalities of the reporting obligations, System Management put forward a Rule Change Proposal: The use of tolerance levels by System Management (RC_2009_22)[1] which introduced a process by which System Management could set a generic Tolerance Range and, where appropriate, specific Facility Tolerance Ranges (refer to clauses 2.13.6A -2.13.6K). The Tolerance Range applied to System Management's reporting obligations under clause 7.10.1 and System Management's operational obligations to request a Market Generator to move back to its Resource Plan under clause 7.10.5[2]. Neither of the changes introduced by RC_2009_22 amended a Market Generator's requirements to adhere to the Market Rules, including the requirement to adhere to Resource Plans.

At the December 2011 meeting of the Rules Development Implementation Working Group (RDIWG), concerns were raised about the ability of some Facilities to comply with Dispatch Instructions under the new Balancing Market arrangements, and in particular Facilities with less flexible ramping capabilities. Given this consideration, the IMO proposed during the further consultation period for the Rule Change Proposal: Competitive Balancing and Load Following Market (RC_2011_10) that the application of the Tolerance Range or Facility Tolerance Range, as applicable, be extended to apply to the output of a Market Generator[3]. The extended application of a Tolerance Range or Facility Tolerance enabled a Facility to ramp to a target level in increments, approximating a linear ramp rate over the instructed range. The IMO's final decision to incorporate the changes was intended to provide some flexibility to "on average" meet instructed MW target, MWh requirements, and ramp rate levels over an interval. Under the Amending Rules which commenced under RC_2011_10 a Market Participant that purposefully biases operation within the Tolerance Range or Facility Tolerance Range (for example, to manipulate Constrained On or Constrained Off Compensation or balancing outcomes) would be subject to a potential compliance action.

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[1] A copy of the Final Report for RC_2009_22 is available on the following webpage: http://www.imowa.com.au/RC_2009_22

[2] Note that the tolerances also applied to System Management's obligation to report Forced Outages.

[3] For further details refer to the further consultation document on the following webpage: http://www.imowa.com.au/RC_2011_10

2. ISSUES

Issue 1: Settlement Tolerance Range

Under the current Market Rules it is possible for a Market Generator to generate away from the requested output amount (as notified via a Dispatch Instruction) by an amount (in MWh) which is greater than the Settlement Tolerance but less than the applicable Tolerance Range or Facility Tolerance Range. This provides for a Market Generator to be:

- compliant with the Dispatch Instruction issued by System Management via the application of the criteria outlined in clause 7.10.2; and
- either:
    - receive Constrained On Compensation for the additional generation above the Settlement Tolerance; or
    - receive Constrained Off Compensation for the reduced generation levels below the Settlement Tolerance (potentially at the Minimum STEM Price of $1000/MWh).

The IMO considers this outcome is inconsistent with the design of Constrained On and Constrained Off Compensation (as implemented under RC_2011_10). Under the new Balancing Market design a Facility that is dispatched by System Management above (or below) its Net Contract Position will be paid (or will pay) the Balancing Price for the quantity involved (as part of normal settlement of Balancing amounts). Constrained On or Constrained Off Compensation may also be required to compensate for differences between the Balancing Price and the price of offers of bid tranches dispatched by System Management. Note that "Out of Merit" dispatch quantities may be the result of a system security situation or due to approximations that must be made in formulating Dispatch Instructions to follow expected trends in dispatch intervals and in calculating half hourly Balancing Prices ex-post.

The IMO notes that a Market Generator with a Facility Tolerance Range which is greater than the generic Tolerance Range can further benefit from the current identified issue with the Market Rules by generating at an even higher level of output (though still below the Facility Tolerance Range) and so receive a greater level of Constrained On Compensation than would otherwise apply. The IMO considers it inappropriate to create incentives under the Market Rules for a Market Generator to apply to System Management for purely financial reasons (and not operational reasons) to determine a Facility Tolerance Range apply for the purposes of the Facility's compliance with clause 7.10.5.

Proposed solution to Issue 1

The IMO proposes to amend:

- the Settlement Tolerance (clause 6.17.9) for a Facility to be equal to the loss factor adjusted MWh equivalent of the Tolerance Range or Facility Tolerance Range (as applicable) associated with the relevant Facility; and

- the Portfolio Settlement Tolerance (clause 6.17.10) for the Verve Energy Balancing Portfolio to be equal to the loss factor adjusted MWh equivalent of the Verve Energy Dispatch Tolerance applicable in that relevant Trading Interval *(refer to Issue 2)*.

The IMO considers that its proposed solution will remove the potential gaming opportunities available for Market Generators to operate above (below) their settlement tolerance but below (above) the applicable Tolerance Range or Facility Tolerance Range and so receive Constrained On Compensation (Constrained Off Compensation). The IMO also notes that the proposed solution will ensure consistency in the treatment of IPPs, Verve Energy Stand Alone Facilities and the Verve Energy Balancing Portfolio with respect to the application of the dispatch tolerances.

Issue 2: Tolerance Range for the Verve Energy Balancing Portfolio

Clause 2.13.6D requires System Management to develop a Tolerance Range to apply to all Facilities for the purposes of System Management's reporting of alleged breaches of clauses 7.10.1 and 3.21 to the IMO. Likewise clause 2.13.6E allows System Management to determine a Facility Tolerance Range to apply in the place of the Tolerance Range for a specific Facility. The Tolerance Range determined by System Management utilises the following standard formula outlined in the Power System Operation Procedure: Monitoring and Reporting:

*Tolerance Range (MW) = from + MAX(6, MIN[5% NPC, 4*ROC])*
*to - MAX(6, MIN[5% NPC, 4*ROC])*

Where:

NPC: is the name plate capacity of the generator, expressed in MW

ROC: is the current dispatch ramp rate of a Scheduled Generator in a particular Trading Interval, expressed in MW per minute

Note that the ROC term is not applied for Non-Scheduled Generators.

As the inputs that go into the standard formula, such as name plate capacity of the generator and dispatched ramp rate, vary by Facility the Tolerance Range for each Facility will potentially differ (though note that through the application of the formula a minimum of a 6MW Tolerance

Range will be established for a Facility).

The treatment of the Verve Energy Balancing Portfolio with respect to the determination of a "dispatch tolerance" however differs to that applied for IPP Facilities and Verve Energy Stand Alone Facilities. In particular clause 7.6A.4(c) sets a dispatch non-compliance tolerance for an individual Facility in the Verve Energy Balancing Portfolio of 10MW.

The IMO does not consider that there is any reason why Facilities in the Verve Energy Balancing Portfolio should be treated differently to IPP Facilities or Verve Energy Stand Alone Facilities. Further, the IMO considers it inappropriate to "hard wire" a tolerance level for each of the Facilities within the Verve Energy Balancing Portfolio as the 10MW tolerance does not necessarily appropriately reflect the likely operational characteristics of that Facility.

Proposed Solution to Issue 2

The IMO proposes to remove the 10 MW tolerance for each of the Facilities within the Verve Energy Balancing Portfolio specified in clause 7.6A.4. The Tolerance Range or Facility Tolerance Range, as applicable, will be determined by System Management for each of the relevant Facilities in accordance with the requirements in clauses 2.13.6D and 2.13.6E[4]. The IMO notes that the obligation for System Management to determine these values for each Facility (including those facilities in the Verve Energy Balancing Portfolio) is already contained in clauses 2.13.6D and 2.13.6E of the Market Rules.

With respect to the overall dispatch compliance of the Verve Energy Balancing Portfolio, the IMO proposes that the tolerance to apply during a Trading Interval be based on the summation of the Tolerance Range or Facility Tolerance Range (as applicable) for each Facility that was operating during the relevant Trading Interval ("Verve Energy Dispatch Tolerance"). This would create a dynamic dispatch tolerance for the Verve Energy Balancing Portfolio. The IMO notes that the Verve Energy Balancing Portfolio would not receive Out of Merit Payments unless it deviated from its Minimum or Maximum Theoretical Energy Schedule by more than the Verve Energy Dispatch Tolerance (refer to issue 1 for further details).

The IMO also proposes to amend clause 2.13.6D to clarify that the Tolerance Range no longer only applies for the purposes of System Management's reporting of non-compliance with clauses 7.10.1 and 3.21.

Issue 3: Clarification of obligations relating to dispatch

Clauses 7.10.6A and 7.10.7 of the Market Rules refer to "a request under clause 7.10.5". Prior to the commencement of the Amending Rules for RC_2011_10 this meant System

[4] Note that under clause 2.13.6H, a Market Participant may apply to the IMO to reassess a Facility Tolerance Range (and the IMO may direct System Management to vary the relevant Facility Tolerance Range

Management requesting a generator to cease its non-compliant behaviour. This aspect of clause 7.10.5 was removed under the new Balancing arrangements, and the only remaining request in the clause is for an explanation of the deviation. Clauses 7.10.6A and 7.10.7 were not updated to reflect this change, with the result that:

- Clause 7.10.6A asks for an explanation of why a Market Participant cannot provide an explanation; and
- Clause 7.10.7 would appear to exempt System Management from telling the IMO about a deviation if the Market Participant has provided an explanation for that deviation.

The IMO notes that these outcomes were not intended under RC_2011_10 and considers that further amendments to the Market Rules to clarify the application of Tolerance Ranges, and Facility Tolerance Ranges (as applicable) are required.

Proposed Solution to Issue 3

To correct the identified issues the IMO proposes to make the following changes to the drafting of section 7.10:

- combine clauses 7.10.6 and 7.10.6A into a single revised clause 7.10.6, which reflects that that if a Market Participant receives a warning and a request for an explanation from System Management under clause 7.10.5(c) then the Market Participant must as soon as practicable provide to System Management an explanation for the deviation and ensure it has complied with the requirements of clause 7A.2 in relation to the Market Participant's Balancing Submission;
- modify clause 7.10.7 to reflect that where System Management has issued a warning about a deviation to a Market Participant under clause 7.10.5(c), System Management must report the deviation to the IMO (unless the deviation is within the Tolerance Range); and
- remove from clause 7.10.7 the references to a failure to comply with the "request referred to in clause 7.10.5".

The IMO notes that civil penalties apply to these provisions of the Market Rules and as such will potentially require the IMO to work with the Public Utilities Office to identify and progress any required updates to the Regulations.

3. RECOMMENDATIONS

The IMO recommends that the Market Advisory Committee:

- **Discuss** the IMO's proposed solutions to each of the identified issues; and
- **Note** that the IMO will prepare a Pre Rule Change Discussion Paper to reflect the proposed solutions, subject to any further amendments required following discussion by the MAC.

Agenda Item 7a: Overview of Recent and Upcoming IMO and System Management Procedure Change Proposals

Legend:

Shaded	Shaded rows indicate procedure changes that have been completed since the last MAC meeting.
Unshaded	Unshaded rows are procedure changes still being progressed.
Red Text	Red text indicates any updates to information

Change ID	Title	Brief overview of changes	Status	Next Step(s)	Date
IMO Procedure Change Proposals					
PC_2011_04	Prudential Requirements	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; • Include some minor and typographical amendments to improve the integrity of the Market Procedure; • Include amendments required as a result of the Pre Rule Change Proposal: Prudential Requirements (PRC_2011_09) and o RC_2010_36 Acceptable Credit Criteria; and o RC_2011_04 List of entities meeting Acceptable Credit Criteria	During further work on drafting changes to the Prudential Requirements Market Procedure to align with the Rule Change Proposal: Prudential Requirements (RC_2011_09) the IMO identified two areas in the proposed Market Procedure that are not aligned with the Rule Change Proposal as currently drafted. The implementation of a workable solution will involve substantial changes to the amendments presented in	• The IMO intends to develop in tandem a modified Rule Change Proposal and updated Market Procedure to address the issues raised originally in RC_2011_09, and expects to present the revised Rule Change Proposal and Market Procedure to the October MAC.	TBA

Change ID	Title	Brief overview of changes	Status	Next Step(s)	Date
			RC_2011_09 to the extent that the IMO considers that it is appropriate to progress a new Rule Change Proposal which corrects the identified issues and will allow full consultation by industry.		
TBA	Undertaking the LT PASA and conducting a review of the Planning Criterion	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; • Include some minor and typographical amendments to improve the integrity of the Market Procedure, including re-ordering some sections; and • Include both reviews required under clause 4.5.15 of the Market Rules (Planning Criterion and forecasting processes).	• The IMO is currently updating the Market Procedure following the February 2011 working group meeting. • As advised at the August 2012 working group meeting, the IMO is currently undertaking the five yearly review of the IMO's forecasting processes. Following the completion of the review the IMO may make further changes to the Market Procedure.	• Updated procedure to be presented back to the Working Group for discussion	
TBA	Participant Registration and Deregistration	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; • Revise the Market Procedure to provide more details of the relevant processes, including restructuring the Market Procedure to better present the process; • Reflect the new MPR system; • Ensure consistency with the Amending Rules from the Rule Change Proposal: Change of Review Board Name (RC_2010_18)	• The IMO is currently revising the Market Procedure	• To be discussed by IMO Procedures Working Group	

Change ID	Title	Brief overview of changes	Status	Next Step(s)	Date
TBA	Facility Registration, Deregistration and Transfer	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; • Reflect the new MPR system; • Revise the Market Procedure to provide more details of the relevant processes including: o restructuring the Market Procedure to better present the process; o providing further details of the consultation processes with System Management; o clarifying that there should not be any restriction on the ability to provide notifications in a manner outlined in the Market Procedure for Notifications and Communications; and o reflect the new processes for digital certificates • Ensure consistency with the Amending Rules from the following Rule Change Proposals; o Curtailable Loads and Demand Side Programmes (RC_2010_29); and o Change of Review Board Name (RC_2010_18), Including the proposed Amending Rules under the Rule Change Proposal: Competitive Balancing and Load Following Market (RC_2011_10)	• The IMO is currently revising the Market Procedure	• To be discussed by IMO Procedures Working Group	
TBA	Settlement	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project;	• The IMO is currently revising the Market Procedure	• To be discussed by IMO Procedures Working Group	

Change ID	Title	Brief overview of changes	Status	Next Step(s)	Date
		• Ensure consistency with the Amending Rules from the following Rule Change Proposals: o Settlement in Default Situations (RC_2010_04) o Change of Review Board Name (RC_2010_18); o Minor and typo (RC_2010_26) o Settlement Cycle Timelines (RC_2010_19) o Acceptable Credit Criteria (RC_2010_36)			
TBA	Meter Data Submission	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; • Clarify that the Procedure is part of the Settlement Market Procedures; • Ensure consistency with amendments to the Market Rules which have occurred since Market Start	• The IMO is currently revising the Market Procedure	• To be discussed by the IMO Procedures Working Group	
TBA	Capacity Credit Allocation	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; • Clarify that the Procedure is part of the Settlement Market Procedures; • Ensure consistency with amendments to the Market Rules which have occurred since Market Start	• The IMO is currently revising the Market Procedure	• To be discussed by IMO Procedures Working Group	
TBA	Intermittent Load Refund	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project;	• The IMO is currently revising the Market Procedure	• To be discussed by IMO Procedures Working Group	

Change ID	Title	Brief overview of changes	Status	Next Step(s)	Date
		• Ensure consistency with amendments to the Market Rules which have occurred since Market Start			
PC_2012_09_	Loss Factors	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; and • Better clarify the processes in the Market Procedure. • Ensure consistency with amendments to the Market Rules which have occurred since Market Start; and • Reflect proposed changes under PRC_2012_07	• A copy of the Pre Rule Change Discussion Paper: Determination of Loss Factors (PRC_2012_07) is on the agenda for discussion at today's meeting. A copy of the amended Market Procedure has been attached for MAC members' reference.	• To be discussed by the IMO Procedures Working Group	
PC_2012_07	Certification of Reserve Capacity	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; • Ensure consistency with the Amending Rules under the following Rule Change Proposals: o Certification of Reserve Capacity (RC_2010_14); o Curtailable Loads and Demand Side Programmes (RC_2010_29), Including the proposed Amending Rules under the Rule Change Proposal: Competitive Balancing and Load Following Market (RC_2011_10)	• The IMO has revised the Market Procedure to reflect the discussion at the August 2012 working group meeting and formally submitted the proposed changes into the formal process	• Submissions close	2 October 2012
TBA	Individual Reserve Capacity Requirements	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; • Ensure consistency with amendments to the Market Rules which have occurred since	• The IMO is currently revising the Market Procedure	• To be discussed by IMO Procedures Working Group	

Change ID	Title	Brief overview of changes	Status	Next Step(s)	Date
		Market Start			
PC_2012_06	Declaration of Bilateral Trades and the Reserve Capacity Auction	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; • Ensure consistency with the Amending Rules from the following Rule Change Proposals: o Curtailable Loads and Demand Side Programmes (RC_2010_29); o Removal of Network Control Services Expression of Interest and Tender Process from the Market Rules (RC_2010_11); and o Certification of Reserve Capacity (RC_2010_14).	• The IMO is currently revising the Market Procedure to reflect the discussion at the August 2012 working group meeting.	• To be submitted into the formal Procedure Change process	
TBA	Reserve Capacity Performance Monitoring	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; • Ensure consistency with the Amending Rules from the Rule Change Proposal: Reserve Capacity Performance Monitoring (RC_2009_19)	• The IMO is currently revising the Market Procedure	• To be discussed by IMO Procedures Working Group	
TBA	Treatment of Small Generators	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; • Ensure consistency with amendments to the Market Rules which have occurred since Market Start	• The IMO is currently revising the Market Procedure	• To be discussed by IMO Procedures Working Group	
TBA	Reserve Capacity Testing	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; • Reflect the new Temperature Dependence	• The IMO is currently revising the Market Procedure	• To be discussed by IMO Procedures Working Group	

Change ID	Title	Brief overview of changes	Status	Next Step(s)	Date
		Curve • Ensure consistency with the proposed Amending Rules under the Rule Change Proposal: Competitive Balancing and Load Following Market (RC_2011_10)			
PC_2012_08	Maximum Reserve Capacity Price	The proposed updates are to ensure consistency with the proposed Amending Rules under the Rule Change Proposal: Competitive Balancing and Load Following Market (RC_2011_10).	• The IMO is currently revising the Market Procedure to reflect the discussion at the August 2012 working group meeting.	• Formal Submission	TBA
TBA	Information Confidentiality	The proposed updates are to: • Reflect the IMO's new format arising from its Market Procedures project; • Ensure consistency with the proposed Amending Rules under the Rule Change Proposal: Competitive Balancing and Load Following Market (RC_2011_10) along with all other rule changes which have occurred since Market Start	• The IMO is currently revising the Market Procedure	• To be discussed by IMO Procedures Working Group	
PC_2012_05	IT Interface – System Overview and requirements	The proposed updates are to ensure consistency with the proposed Amending Rules under the Rule Change Proposal: Competitive Balancing an Load Following Market (RC_2011_10)	• Completed		Commenced 13 August 2012

Agenda Item 8a: Working Group Overview

1. WORKING GROUP OVERVIEW

Working Group (WG)	Status	Date commenced	Date concluded	Latest meeting date	Next scheduled meeting date
System Management Procedures WG	Active	Jul 07	Ongoing	12/12/2011	TBA
IMO Procedures WG	Active	Dec 07	Ongoing	14/08/2012	TBA
Rules Development Implementation WG	Active	Aug 10	Ongoing	07/06/2012	19/09/2012
Reserve Capacity Mechanism WG	Active	Feb 12	Ongoing	12/07/2012	13/09/2012

INDEPENDENT
MARKET
OPERATOR

Market Procedure:
Determining Loss Factors

VERSION 2

ELECTRICITY INDUSTRY ACT 2004

ELECTRICITY INDUSTRY

(WHOLESALE ELECTRICITY MARKET)

REGULATIONS 2004

WHOLESALE ELECTRICITY MARKET RULES

COMMENCEMENT:

This Market Procedure took effect from 8:00am (WST) on the

same date as the Wholesale Electricity Market Rules.

VERSION HISTORY

VERSION	EFFECTIVE DATE	NOTES
1	21 September 2006	Market Procedure for determining Loss Factors
2	DD MMMM 2012	Amendments to Market Procedure resulting from PC_2012_09

imo

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LIST OF TABLES

1 PROCEDURE OVERVIEW

1.1 Relationship with the Market Rules

1.1.1 This Market Procedure for Determining Loss Factors (Procedure) should be read in conjunction with clause 2.27.17 of the Wholesale Electricity Market (WEM) Rules (Market Rules)

1.1.2 Reference to particular Market Rules within the Procedure in bold and square brackets **[Clause XX]** are current as of 1 September 2012. These references are included for convenience only and are not part of this Procedure.

1.2 Purpose of this Procedure

1.2.1 This Procedure outlines the standards, methodologies, classification systems and procedures to be used in determining Loss Factors.

1.3 Application of this Procedure

1.3.1 In this Procedure where obligations are conferred on a Rule Participant that Rule Participant must comply with the relevant obligations in accordance with clauses 2.9.6, 2.9.7 and 2.9.8, as applicable.

1.4 Associated Market Procedures

1.4.1 The following IMO Market Procedures are associated with this Procedure:

(a) Notices and Communications.

1.5 Conventions Used

1.5.1 In this Procedure, the conventions specified in clauses 1.3 - 1.5 of the Market Rules apply.

1.6 Terminologies and Definitions

1.6.1 A word or phrase defined in the Market Rules, the Electricity Industry Act or the Regulations has the same meaning when used in this Procedure. In addition the following defined terms have the meaning given.

Term	Definition
Access Contract	Has the meaning given to it in the Electricity Networks Access Code 2004.
Analysis Period	In respect of the annual recalculation of Transmission and Distribution Loss Factors, the 12 month period ending on 31 March immediately prior to the 1 June by which the recalculated Transmission and Distribution Loss Factors must be provided to the IMO.
Connection Point	Has the meaning given to it in the Electricity Networks Access Code 2004. Typically each Connection Point in the WEM is identified by a National Meter Identifier (NMI), but in some cases Western Power may treat a number of NMIs as a single logical Connection Point in an Access Contract.

Term	Definition
	This means that a Connection Point as defined by Western Power may relate to several Loads in the WEM (each identified by a NMI) or to several Scheduled Generators or Non-Scheduled Generators (each of which may relate to one or more NMIs).
Distribution System	Has the meaning given to it in the Electricity Networks Access Code 2004.
DLF	Means Distribution Loss Factor.
DLF Class	Means Distribution Loss Factor Class.
Entry Point	Has the meaning given to it in the Electricity Networks Access Code 2004.
Exit Point	Has the meaning given to it in the Electricity Networks Access Code 2004.
Peak Consumption	Means the Contracted Maximum Demand (CMD) for an Exit Point declared in an Access Contract, or where no CMD is declared, it means the peak demand that is likely to occur at an exit point over a 12 month period as determined by the Network Operator, acting as a reasonable and prudent person.
Pricing Zone	A grouping of several Substations based on their location, as defined in the Price List approved by the Economic Regulation Authority from time to time.
Reference Service	Has the meaning given to it in the Electricity Networks Access Code 2004.
Registered Market Participant	In respect of a Required Connection Point, the Market Participant to which the Facility connected at that Connection Point is registered.
Required Connection Point	In respect of a Network Operator, a Connection Point in the Network Operator's network identified under clause 2.27.1(a) of the Market Rules, for which the Network Operator must determine a Loss Factor.
Substation	Means a network facility at which lines are switched for operational purposes, and which may include one or more transformers so that some connected lines operate at different nominal voltages to others. Substations are identified in the SWIS by a Transmission Node Identifier (TNI).
TLF	Means Transmission Loss Factor.
TLF Calculation Program	Means an appropriate industry standard package used by a Network Operator to calculate Transmission Loss Factors.
TLF Class	Means Transmission Loss Factor Class.
Transmission System	Has the meaning given to it in the Electricity Networks Access Code 2004.
Zone Substation	Means a Substation connecting the Transmission and

Term	Definition
	Distribution System.

Table 1 – Defined Terms

2 DETERMINATION AND PROVISION OF LOSS FACTORS

2.1 Assignment of Connection Points to Loss Factor Classes

2.1.1 When a Network Operator becomes aware of a new Required Connection Point in its network (including a Connection Point for a Non-Dispatchable Load that is upgraded from basic to interval metering), the Network Operator must, as soon as practicable but in any event before the information must be used in any calculations under the Market Rules:

(a) determine the Transmission Loss Factor Class (TLF Class) and Distribution Loss Factor Class (DLF Class) for the Required Connection Point in accordance with the classification system prescribed for that Network Operator in section 3 of this Procedure; **[Clause 2.27.12]**

(b) provide to the IMO and the Registered Market Participant:

i. the Loss Factor Classes for the Required Connection Point; and

ii. the Trading Day from which the Loss Factor Classes will have effect. **[Clause 2.27.14]**

2.1.2 When a change occurs to a Required Connection Point that might alter its applicable Loss Factor Classes, the Network Operator must, as soon as practicable but in any event before the information must be used in any calculations under the Market Rules:

(a) re-determine the Loss Factor Classes for the Required Connection Point in accordance with the classification system prescribed for that Network Operator in section 3 of this Procedure **[Clause 2.27.13]**; and

(b) if the re-determination results in a change to the TLF Class or DLF Class, provide to the IMO and the Registered Market Participant:

i. the new TLF Class or DLF Class (as applicable) for the Required Connection Point; and

ii. the Trading Day from which the new Loss Factor Class will have effect, which must as far as practicable reflect the time of the change that triggered the re-determination. **[Clause 2.27.14]**

2.1.3 When a Network Operator becomes aware of a change to the Registered Market Participant for a Required Connection Point, the Network Operator must, as soon as practicable provide to the new Registered Market Participant the Loss Factor Classes for the Required Connection Point.

2.2 Annual recalculation of Loss Factors

2.2.1 By 1 June of each year, each Network Operator must:

(a) recalculate the Loss Factors for its Required Connection Points, in accordance with the methodology prescribed for that Network Operator in section 4 of this Procedure;

(b) provide to the IMO by email (to Operations@imowa.com.au):

i. updated Transmission Loss Factors (TLFs) and Distribution Loss Factors (DLFs) as applicable for each Loss Factor Class in the Network Operator's classification system **[Clause 2.27.6]**; and

ii. a written explanation of any change of more than 0.025 between an updated TLF or DLF and the previous value assigned to that Loss Factor Class.

2.2.2 As soon as practicable, but no later than two Business Days after receiving the updated TLFs and DLFs from all Network Operators under step 2.2.1(b), the IMO must publish on the Market Website:

(a) the updated TLFs and DLFs received from each Network Operator **[Clause 2.27.7]**;

(b) any written explanation of changes to TLFs or DLFs received from a Network Operator; and

(c) the Trading Day from which the updated TLFs and DLFs will apply, which must allow sufficient time for Market Participants to identify and update Standing Data that is dependent on Loss Factors. **[Clauses 2.27.8 and 2.27.9]**

2.3 Creation of new Loss Factor Classes

2.3.1 If a Network Operator must develop a new Loss Factor Class to comply with its prescribed classification system then the Network Operator must, as soon as practicable but in any event before a Required Connection Point is assigned to the new Loss Factor Class:

(a) calculate the initial TLF or DLF for the new Loss Factor Class in accordance with the methodology prescribed in section 4 of this Procedure;

(b) provide to the IMO by email (to Operations@imowa.com.au) the details of the new Loss Factor Class, including its initial TLF or DLF (as applicable). **[Clause 2.27.10]**

2.3.2 If the IMO receives details of a new Loss Factor Class from a Network Operator under step 2.3.1(b), the IMO must within two Business Days publish the details of the new Loss Factor Class and its initial TLF or DLF on the Market Web Site. **[Clause 2.27.11]**

2.4 Reassessment of Loss Factors

2.4.1 Where a Market Participant believes that:

(a) the TLF for a TLF Class has been calculated incorrectly; or

(b) the DLF for a DLF Class has been calculated incorrectly; or

(c) a Required Connection Point has been assigned to the wrong TLF Class or DLF Class,

the Market Participant may apply to the IMO for reassessment. **[Clause 2.27.15]**

2.4.2 A Market Participant may seek reassessment for any TLF or DLF applying to a Required Connection Point for which it is the Registered Market Participant.

2.4.3 To seek a reassessment the Market Participant must apply to the IMO by email (to Operations@imowa.com.au) within 15 Business Days of the Market Participant

receiving notification of the TLF or DLF it believes to be in error. The application must outline:

(a) the TLF or DLF believed to be in error; and

(b) the Market Participant's reasons for believing the TLF or DLF should be a different value.

2.4.4 Within two Business Days of receipt of the Market Participant's application, the IMO must notify the relevant Network Operator that it will be carrying out an audit of the Loss Factor calculation. The notification will outline:

(a) the TLF or DLF believed to be in error;

(b) a request for access to the relevant data and calculations used in producing the TLF or DLF for the Loss Factor Class, or determining the Loss Factor Class for the Connection Point (as applicable). The request may include:

i. provision of written information to the IMO by the Network Operator; and

ii. access to the Network Operator's premises, systems and personnel for the IMO to review relevant data and calculations, including the Network Operator providing a demonstration of any systems and processes used to calculate Loss Factors or replication of the process used to calculate the Loss Factors at issue; and

(c) a date by which the Network Operator must comply with the request, which must be no less than five Business Days from the date of the IMO notification.

2.4.5 The IMO may, as it sees fit, institute any one or more of the following levels of audit:

(a) Level 1 – reviewing the reasons provided by the notifying Market Participant for believing the TLF or DLF should be a different value and/or reasons provided by the Network Operator for the TLF or DLF value as calculated;

(b) Level 2 – reviewing or analysing the data used to calculate the TLF or DLF;

(c) Level 3 – reviewing, replicating, or rerunning the models or calculation processes used to calculate the TLF or DLF.

2.4.6 The IMO may, at its discretion, aggregate its audit of Loss Factor calculations that are the subject of Market Participant applications under section 2.4 of this Procedure, provided the IMO adheres to the timing parameters outlined in the Market Rules and this Procedure for each individual Market Participant's application.

2.4.7 The relevant Network Operator must cooperate with an IMO audit of any Loss Factor calculation, including provision of access to the data, systems, calculations and personnel used in producing the Loss Factor.

2.4.8 Where an audit reveals an error in the calculation of a TLF or DLF for a Loss Factor Class, the IMO must direct the relevant Network Operator to recalculate the TLF or DLF. The IMO may also direct the Network Operator to recalculate any other TLFs or DLFs, where the IMO is of the view that a recalculation is warranted.

2.4.9 The Network Operator must provide any recalculated TLFs or DLFs to the IMO as soon as practicable after receipt of the IMO's direction to recalculate.

2.4.10 As soon as practicable, but no later than two Business Days after receiving a recalculated TLF or DLF from a Network Operator under step 2.4.9, the IMO must publish on the Market Web Site:

(a) the recalculated TLF or DLF; and

(b) the Trading Day from which the recalculated TLF or DLF will apply, which must allow sufficient time for Market Participants to identify and update Standing Data that is dependent on Loss Factors.

2.4.11 Where an audit reveals an error in the assignment of a Required Connection Point to a Loss Factor Class, the IMO must direct the relevant Network Operator to correct the error and re-determine the Loss Factor Class.

2.4.12 Where directed by the IMO under step 2.4.11, a Network Operator must as soon as reasonably practicable:

(a) correct the error which caused the incorrect assignment;

(b) re-determine the Loss Factor Class for the Required Connection Point; and

(c) provide to the IMO and the Registered Market Participant:

i. the new TLF Class or DLF Class (as applicable) for the Required Connection Point; and

ii. the Trading Day from which the new Loss Factor Class will apply.

2.4.13 Where an audit reveals a material error in the Loss Factor which was the subject of an audit (e.g. error of more than 0.0025 in a TLF or DLF, or an incorrect assignment of a Connection Point to a Loss Factor Class), the Network Operator must pay the costs of the audit. Otherwise the Market Participant who initiated the audit must pay all relevant costs for the audit, including those of the Network Operator.

2.5 Failure to provide Loss Factors

2.5.1 In the event a Network Operator fails to provide the IMO with a TLF or DLF, as required in accordance with this Procedure or the Market Rules, the IMO must use the equivalent TLF or DLF from the previous year.

2.5.2 Where a Network Operator subsequently provides an updated TLF or DLF, the previous year's TLF or DLF will continue to apply until the commencement of the applicable Trading Day published by the IMO for the updated value.

3 LOSS FACTOR CLASSIFICATION SYSTEMS

3.1 Transmission Loss Factor Classes – Western Power

3.1.1 Western Power must define a unique TLF Class for:

(a) subject to step 3.1.2, each Connection Point on its transmission system at which a Scheduled Generator, Non-Scheduled Generator or Load is connected;

(b) each Zone Substation on its network;

(c) its transmission system as a whole ("Transmission SWIN Average"); and

(d) the group of Substations assigned to the Urban and CBD Pricing Zones ("Transmission Urban Average").

3.1.2 Where multiple physical transmission connections at a Substation are identified as a single Connection Point by Western Power in an Access Contract, Western Power may define a single TLF Class to apply to each Scheduled Generator, Non-Scheduled Generator or Load connected through that Connection Point.

The Bi-directional Reference Services listed in step 3.1.3(b) below will need to be confirmed once the latest Access Arrangement has been finalised.

3.1.3 Western Power must assign each Required Connection Point on its network to a TLF Class in accordance with the following:

(a) if the Connection Point is on the transmission system it must be assigned to the specific TLF Class for the Connection Point prescribed in step 3.1.1(a); or else

(b) if the Connection Point:

i. is contracted on any of the following Reference Services:

1. A1 – Anytime Energy (Residential) Exit Service;
2. A2 – Anytime Energy (Business) Exit Service;
3. A3 – Time of Use Energy (Residential) Exit Service;
4. A4 – Time of Use Energy (Business) Exit Service;
5. A5 – High Voltage Metered Demand Exit Service;
6. A6 – Low Voltage Metered Demand Exit Service;
7. C1 – Anytime Energy (Residential) Bi-directional Service;
8. C2 – Anytime Energy (Business) Bi-directional Service;
9. C3 – Time of Use Energy (Residential) Bi-directional Service; or
10. C4 – Time of Use Energy (Business) Bi-directional Service; or

ii. is an Exit Point with Peak Consumption less than 1000 kVA,

it must be assigned to the Transmission SWIN Average TLF Class prescribed in step 3.1.1(c); or else

(c) if the Connection Point has Peak Consumption greater than or equal to 1000 kVA and:

i. the associated Substation identified in an Access Contract; or

ii. the electrically closest Substation (if a Substation is not identified in the Access Contract)

is in the Urban or CBD Pricing Zones, the Connection Point must be assigned to the TLF Class prescribed in step 3.1.1(d); or else

(d) if a specific Substation is identified in the Access Contract for the Connection Point, the Connection Point must be assigned to the TLF Class prescribed in step 3.1.1(b) for that Substation; or else

(e) the Connection Point must be assigned to the TLF Class prescribed in step 3.1.1(b) for the electrically closest Substation.

3.1.4 Western Power must assign the Notional Wholesale Meter to the Transmission SWIN Average TLF Class prescribed in step 3.1.1(c).

3.2 Distribution Loss Factor Classes – Western Power

3.2.1 Western Power must define a unique DLF Class for:

(a) Connection Points on the transmission system ("Transmission Connected");

(b) Connection Points connected to the network at the distribution busbar of a Zone Substation ("Zone Substation Connected");

(c) each Connection Point on the distribution system for which Western Power determines under step 3.2.3 that a specific DLF Class is required;

(d) each of the following Reference Services:

i. A1 – Anytime Energy (Residential) Exit Service;

ii. A2 – Anytime Energy (Business) Exit Service;

iii. A3 – Time of Use Energy (Residential) Exit Service;

iv. A4 – Time of Use Energy (Business) Exit Service;

v. A5 – High Voltage Metered Demand Exit Service;

vi. A6 – Low Voltage Metered Demand Exit Service;

vii. C1 – Anytime Energy (Residential) Bi-directional Service;

viii. C2 – Anytime Energy (Business) Bi-directional Service;

ix. C3 – Time of Use Energy (Residential) Bi-directional Service; and

x. C4 – Time of Use Energy (Business) Bi-directional Service; and

(e) the Notional Wholesale Meter.

3.2.2 Where a site that is supplied by multiple distribution feeders is identified as a single Connection Point by Western Power in an Access Contract and Western Power defines a specific DLF Class for the Connection Point, then that DLF Class will be assigned to each NMI associated with the Connection Point.

3.2.3 Western Power must assign each Required Connection Point on its network to a DLF Class in accordance with the following:

(a) if the Connection Point is on the transmission system then it must be assigned to the Transmission Connected DLF Class prescribed in step 3.2.1(a); or else

(b) if the Connection Point is connected to the network at the distribution busbar of a Zone Substation, it must be assigned to the Zone Substation Connected DLF Class prescribed in step 3.2.1(b); or else

(c) if a Scheduled Generator, Non-Scheduled Generator, Dispatchable Load or Interruptible Load is connected through the Connection Point, then the Connection Point must be assigned to a specific DLF Class defined for it in step 3.2.1(c); or else

(d) if the Connection Point is contracted on one of the following Reference Services:

i. A1 – Anytime Energy (Residential) Exit Service;

ii. A2 – Anytime Energy (Business) Exit Service;

iii. A3 – Time of Use Energy (Residential) Exit Service;

iv. A4 – Time of Use Energy (Business) Exit Service;

v. A5 – High Voltage Metered Demand Exit Service;

vi. A6 – Low Voltage Metered Demand Exit Service;

vii. C1 – Anytime Energy (Residential) Bi-directional Service;

viii. C2 – Anytime Energy (Business) Bi-directional Service;

ix. C3 – Time of Use Energy (Residential) Bi-directional Service; or

x. C4 – Time of Use Energy (Business) Bi-directional Service,

then it must be assigned to the DLF Class prescribed for the relevant Reference Service in step 3.2.1(d); or else

(e) if the Connection Point is:

i. an Exit Point with Peak Consumption greater than 7000 kVA; or

ii. an Entry Point,

it must be assigned to a specific DLF Class defined for it in step 3.2.1(c); or else

(f) if the Connection Point has Peak Consumption less than 1000 kVA then:

i. if the Connection Point is connected to the distribution system at low voltage (nominally 415 volts or less) and is located at a residential premise or a premise occupied by a voluntary/charitable organisation, it must be assigned to the Anytime Energy (Residential) Exit Service DLF Class prescribed in step 3.2.1(d); or

ii. if the Connection Point is connected to the distribution system at low voltage (nominally 415 volts or less) and is located at a commercial premise, it must be assigned to the Anytime Energy (Business) Exit Service DLF Class prescribed in step 3.2.1(d); or

iii. if the Connection Point is connected to the distribution system at high voltage (nominally greater than 415 volts), it must be assigned to the High Voltage Metered Demand Exit Service DLF Class prescribed in step 3.2.1(d); or else

(g) if the Connection Point is located greater than 10 km from:

i. the associated Substation identified in an Access Contract; or

ii. the electrically closest Substation (if a Substation is not identified in the Access Contract),

it must be assigned to a specific DLF Class defined for it in step 3.2.1(c); or else

(h) if the Registered Market Participant has requested Western Power to calculate a specific DLF for the Connection Point at the Market Participant's expense in step 3.2.5 or step 3.2.7, the Connection Point must be assigned to a specific DLF Class defined for it in step 3.2.1(c); or else

(i) if the Connection Point is connected to the distribution system at high voltage (nominally greater than 415 volts) it must be assigned to the High Voltage Metered Demand Exit Service DLF Class prescribed in step 3.2.1(d); or else

(j) the Connection Point must be assigned to the Low Voltage Metered Demand Exit Service DLF Class prescribed in step 3.2.1(d).

3.2.4 Western Power must assign the Notional Wholesale Meter to the Notional Wholesale Meter DLF Class prescribed in step 3.2.1(e).

Requests for individual DLF calculations for eligible Connection Points

3.2.5 If a Required Connection Point on Western Power's network:

(a) has Peak Consumption between 1000 kVA and 7000 kVA inclusive; and

(b) is located 10 km or less from:

i. the associated Substation identified in an Access Contract; or

ii. the electrically closest Substation (if a Substation is not identified in the Access Contract),

the Registered Market Participant may request Western Power to calculate a specific DLF for the Connection Point at the Market Participant's expense, by notifying the Western Power account manager assigned to the Market Participant in writing.

3.2.6 Before recalculating its DLFs each year under step 2.2.1, Western Power must:

(a) identify those Connection Points that are eligible to have an individual DLF calculated at the Registered Market Participant's expense;

(b) provide each affected Market Participant, through its Western Power account manager, with a list of its eligible Connection Points and request that the Market Participant confirm for which of these Connection Points an individual DLF is required.

3.2.7 If a Market Participant receives a notification under step 3.2.6(b), then within 10 Business Days it must notify its Western Power account manager, in writing, for which of its eligible Connection Points it requires the calculation of an individual DLF.

4 LOSS FACTOR CALCULATION METHODOLOGIES

4.1 Transmission Loss Factor Methodology – Western Power

Annual recalculation of Transmission Loss Factors

4.1.1 Western Power must select an appropriate industry standard program as its TLF Calculation Program.

4.1.2 Western Power must compile schedules of historical network load (exit) and generation (entry) energy quantities for each Trading Interval in the Analysis Period, for each physical transmission connection on the boundary of its transmission system for which this information is available.

4.1.3 Where a physical transmission is used for both entry and exit, Western Power must compile separate schedules for each (i.e. entry and exit quantities must not be netted against one another).

4.1.4 Western Power must allocate each physical transmission connection on the boundary of its transmission system to a TLF Class as follows:

(a) if the physical transmission connection is identified as part or all of a Connection Point by Western Power in an Access Contract, then the

physical transmission connection must be assigned to the TLF Class defined for that Connection Point in step 3.1.1(a); or

(b) if the physical connection point provides a connection to the distribution system then it must be assigned to the TLF Class defined for the relevant Zone Substation in step 3.1.1(b).

4.1.5 Where a single physical transmission connection is allocated to a TLF Class, Western Power must allocate the schedules of exit data and/or entry data (as applicable) for the physical transmission connection to that TLF Class.

4.1.6 Where multiple physical transmission connections are allocated to a TLF Class, Western Power must summate the schedules of exit and/or entry data (as applicable) compiled in step 4.1.2 for the physical transmission connection to produce single schedules of exit data and/or entry data (as applicable) for that TLF Class.

4.1.7 For any Trading Interval in the Analysis Period, if total generation (as measured by the sum of the entry schedules identified in step 4.1.2) does not equal total load (as measured by the sum of the exit schedules identified in step 4.1.2) +/- 10%, then Western Power must exclude the data for that Trading Interval from the schedules determined for each TLF Class in steps 4.1.5 and 4.1.6.

4.1.8 Western Power must sufficiently document the source and processing of the generation and load information it uses to calculate TLFs to allow it to be reviewed should the information become subject to an IMO audit.

4.1.9 Western Power must compile network topology information that reflects the actual system configuration, impedance and state, using its TLF Calculation Program. The base load flow case must include as commissioned equipment at 31 March in the relevant year and be representative of the typical system operating state consistent with the Western Power Drawing No TS1 (Transmission System Diagram).

4.1.10 Western Power must load the schedules described in steps 4.1.5 and 4.1.6, as amended in step 4.1.7, into its TLF Calculation Program.

4.1.11 Western Power must have in place processes to examine the information files for errors, including missing or erroneous data. Western Power must have in place processes for reloading the correct information and recalculating data, as required, including a process to check that any error or changes required have been fixed.

4.1.12 Western Power must use its TLF Calculation Program to calculate static average marginal loss factors for each modelled exit and entry point. The calculation must involve the following steps:

(a) a load flow is solved for each Trading Interval in the Analysis Period (except for Trading Intervals excluded in step 4.1.7) using the energy schedules compiled for each modelled entry and exit point;

(b) a marginal loss factor is calculated for each modelled entry and exit point for each Trading Interval with respect to the Reference Node; and

(c) the static average marginal loss factor for each modelled entry or exit point is calculated as the energy weighted average of the marginal loss factors calculated for that point.

4.1.13 If either an entry point or an exit point (but not both) was modeled for a TLF Class in step 4.1.12 then Western Power must determine the TLF for that TLF Class to

be the static average marginal loss factor calculated for that entry point or exit point (as applicable) in step 4.1.12(c).

4.1.14 If both an entry point and an exit point were modeled for a TLF Class in step 4.1.12 then Western Power must determine the TLF for that TLF Class to be the energy weighted average of the static average marginal loss factors calculated for the entry point and the exit point in step 4.1.12(c).

4.1.15 Western Power must calculate the TLF for the Transmission SWIN Average TLF Class as the energy weighted average of all the static average marginal loss factors calculated for exit points in step 4.1.12(c).

4.1.16 Western Power must calculate the TLF for the Transmission Urban Average TLF Class as the energy weighted average of all the static average marginal loss factors calculated for exit points for TLF Classes defined for Substations in the Urban and CBD Pricing Zones.

Calculation of a Transmission Loss Factor for a new Transmission Loss Factor Class

4.1.17 If a new Substation is commissioned then Western Power must assign the TLF of the electrically nearest Substation to any new TLF Classes defined for the new Substation or its Connection Points in steps 3.1.1(a) or 3.1.1(b), until specific TLFs are determined for these TLF Classes in the next annual recalculation of Loss Factors.

4.1.18 If a new Connection Point is connected to an existing Substation then Western Power must assign the TLF for that Substation to the new TLF Class defined for the Connection Point in step 3.1.1(a), until a specific TLF is determined for this TLF Class in the next annual recalculation of Loss Factors.

4.2 Distribution Loss Factor Methodology - Western Power

Annual recalculation of Distribution Loss Factors

4.2.1 Western Power must determine from its information systems:

(a) the total net kWh consumption from its distribution system over the Analysis Period ("Total Sales"); and

(b) the total kWh distribution losses over the Analysis Period ("Total Losses").

4.2.2 Western Power must assign a DLF to the Zone Substation Connected DLF Class that reflects typical Zone Substation transformer losses incurred by a Connection Point connected to the network at the distribution busbar of a Zone Substation.

4.2.3 Western Power must identify each Connection Point on its distribution system for which:

(a) the calculation of an individual DLF is required under steps 3.2.3(c), 3.2.3(e) or 3.2.3(g); or

(b) the Registered Market Participant has confirmed that an individually calculated DLF is required in step 3.2.7.

4.2.4 For each Connection Point identified in step 4.2.3, Western Power must:

(a) compile details of the Connection Point's maximum demand or declared sent-out capacity (as applicable), network configuration and feeder peak demand, where these details may be sourced from historical data in Western

Power's information systems or from forecasted values if Western Power considers these to be more appropriate;

(b) use an appropriate industry software package to calculate an individual DLF for the Connection Point using the formula and methodology detailed in Schedule 4 of the Electricity Distribution Regulations 1997; and

(c) assign the calculated DLF to the DLF Class defined for that Connection Point.

4.2.5 Where an individual DLF must be calculated for a site that is supplied by multiple distribution feeders but is identified as a single Connection Point by Western Power in an Access Contract, Western Power must determine DLFs for each feeder as described in step 4.2.4(b), and then calculate the DLF for the DLF Class as the average of the calculated DLFs.

4.2.6 Western Power must determine the DLFs for the High Voltage Metered Demand Exit Service DLF Class and the Low Voltage Metered Demand Exit Service DLF Class using appropriate assumptions with regard to losses on high voltage lines and in distribution transformers.

4.2.7 Western Power must apply the DLFs calculated in steps 4.2.2, 4.2.4 and 4.2.6 to the total net kWh consumption ("sales") for the applicable Connection Points to calculate the losses attributable to these Connection Points over the Analysis Period.

4.2.8 Western Power must allocate the remaining losses (i.e. Total Losses – losses calculated in step 4.2.7) amongst the remaining Connection Points on the distribution system according to their contracted Reference Service, based on the estimated relative contribution to peak load losses of typical customers on each of the relevant Reference Services.

4.2.9 Western Power must use the losses assigned to each Reference Service in step 4.2.8 and the sales for each of these Reference Services over the Analysis Period to calculate DLFs for each of the following DLF Classes:

(a) Anytime Energy (Residential) Exit Service DLF Class;

(b) Anytime Energy (Business) Exit Service DLF Class;

(c) Time of Use Energy (Residential) Exit Service DLF Class;

(d) Time of Use Energy (Business) Exit Service DLF Class;

(e) Anytime Energy (Residential) Bi-directional Service DLF Class;

(f) Anytime Energy (Business) Bi-directional Service DLF Class;

(g) Time of Use Energy (Residential) Bi-directional Service DLF Class; and

(h) Time of Use Energy (Business) Bi-directional Service DLF Class.

4.2.10 Western Power must apply the DLFs calculated in step 4.2.9 to the sales for the applicable (interval metered) Required Connection Points to calculate the losses attributable to these Connection Points over the Analysis Period.

4.2.11 Western Power must calculate the DLF for the Notional Wholesale Meter DLF Class as one plus the ratio of the remaining losses (i.e. Total Losses – losses calculated in steps 4.2.7 and 4.2.10) to the remaining sales (i.e. Total Sales – sales for the Connection Points whose losses were calculated in steps 4.2.7 and 4.2.10).

4.2.12 Western Power must assign a DLF of one to the Transmission Connected DLF Class.

Calculation of a Distribution Loss Factor for a new Distribution Loss Factor Class

4.2.13 If a Market Participant requests Western Power to calculate an individual DLF for a Connection Point in step 3.2.5, Western Power must calculate the individual DLF using the methodology outlined in step 4.2.4 of this Procedure.

5 DOCUMENTATION REQUIREMENTS

For discussion by the IMO Procedure Change and Development Working Group. The steps below are copied from the current Market Procedure. The IMO will be seeking input from the Working Group on what documentation on Loss Factor determination should be provided by Network Operators to the IMO and published on the IMO web site.

5.1.1 The Network Operator must have in place internal procedures and business processes for calculating Loss Factors.

5.1.2 The Network Operator must sufficiently document all its models, procedures, processes and methodologies used to calculate Loss Factors to allow for these to be reviewed should the Loss Factor calculations become subject to an IMO audit. The models, procedures, processes and methodologies used to calculate Loss Factors must be provided to the IMO by the Network Operator no later than 5 Business Days following the commencement of this Procedure. The IMO must publish the models, procedures, processes and methodologies as soon as practicable on its Web Site. Any subsequent change proposed to the models, procedures, processes and methodologies used to calculate Loss Factors must be provided to the IMO by the Network Operator and published by the IMO as soon as practicable. The Network Operator must allow sufficient time for the IMO to review the change and seek comments from Market Participants on the change before the change is implemented.