

## Independent Market Operator

### MRCPWG

## Minutes

<b>Meeting No.</b>	5
<b>Location:</b>	IMO Board Room Level 3, Governor Stirling Building, 197 St Georges Terrace, Perth
<b>Date:</b>	Wednesday 15 September 2010
<b>Time:</b>	Commencing at 3:00 to 5:00pm

<b>Attendees</b>	
Troy Forward	IMO (Chair)
Fiona Edmonds	IMO (Minutes)
Greg Ruthven	IMO
Ben Williams	IMO
Monica Tedeschi	IMO
Corey Dykstra	Market Customer
Stephen MacLean	Market Customer
Neil Hay	System Management (3.10-4.20pm)
Shane Cremin	Market Generator
Brad Huppertz	Market Generator
Pablo Campillos	DSM Aggregator
Nenad Ninkov	New Investor
Neil Gibbney	Western Power
Chris Brown	Economic Regulation Authority (ERA) (Observer)
<b>Apologies</b>	
Patrick Peake	Market Generator

<b>Item</b>	<b>Subject</b>	<b>Action</b>
1.	<p><b>WELCOME AND APOLOGIES / ATTENDANCE</b></p> <p>The Chair opened the 5th meeting of the Maximum Reserve Capacity Price (MRCP) Working Group (Working Group) at 3:00pm.</p> <p>Apologies were received from:</p> <ul style="list-style-type: none"> <li>Patrick Peake – Market Customer.</li> </ul>	
2.	<p><b>MINUTES OF PREVIOUS MEETING</b></p> <p>The minutes of the 4th MRCP Working Group meeting, held 23 August 2010, were circulated prior to the meeting. The following</p>	

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	<p>amendments were agreed:</p> <ul style="list-style-type: none"> <li>• Mr Stephen MacLean questioned whether it was necessary to note that the solution around the proposed methodology for determining the deep connection costs should be not inconsistent with the market objectives as this is self evident. Mr Neil Gibbney noted that the Working Group should ensure that this is clear to the Consultant. Dr Steve Gould questioned the use of double negatives in minutes, e.g. “not inconsistent with...”. The Chair agreed to remove the following sentence: “The Chair states it was reasonable to suggest that the solution should not be inconsistent with the market objectives.”</li> <li>• Mr Campillos noted that he did not recall the discussion around the assumption that an auction is held when determining the MRCP and questioned how the action point for the IMO to issue the review of deep connection costs scope of work related. Ms Monica Tedeschi clarified that the IMO had removed from the minutes some of the discussion around the wider Reserve Capacity Mechanism as it was out of scope. The Chair agreed that the IMO would review the discussion presented in the minutes further.</li> <li>• Mr Corey Dykstra suggested that the reference should be to “Declare intent to bilaterally trade capacity and removing uncertainty...” rather than “...free uncertainty”.</li> <li>• The Chair noted that the IMO would update the reference in the discussion around the Gas Turbine Price information provided to Working Group members to MW not kW.</li> <li>• Mr Brad Huppatz clarified his comments around the standard size of plant, saying that 160MW plant was more consistent with other parts of the market and that 100 MW plant was the standard size for Verve Energy plant. Mr Shane Cremin clarified that the Verve Kwinana high efficiency gas turbines are probably installed to provide Load Following and Balancing services rather than operate as peaking plant. The Chair agreed that the IMO would update the minutes to reflect the intent of Mr Huppatz’s comments.</li> <li>• Mr Dykstra suggested amending the discussion around Liquid Fuel Storage and Handling Facilities as follows: “The Market Procedure currently requires on-site storage for 24 hours of operation with an allowance for keeping the tank... “ Mr Dykstra also noted that it had been agreed to update the Market Procedure to refer to the 14 hour fuel requirement in the Market Rules. The Chair agreed to make these amendments.</li> </ul> <p><i>Action Point: The IMO to make the agreed amendments and publish Meeting 4 minutes on the website as final.</i></p>	<b>IMO</b>
<b>3</b>	<p><b>ACTION POINTS</b></p> <p>The actions arising were either complete or on the meeting agenda. Mr Greg Ruthven noting the following exceptions:</p>	

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	<ul style="list-style-type: none"> <li>• AP5: The IMO is currently preparing the Procedure Change Report on the revised Market Procedure (PC_2010_04). One submission supporting the amendment had been received during the public consultation process.</li> <li>• AP12: The IMO will undertake further analysis of the impacts on the MRCP of removing the assumption that an auction is held and present the results to the Market Advisory Committee (MAC).</li> <li>• AP32: The IMO noted that the two requests for tender for the review of deep connection costs and the review of the WACC have been updated to incorporate the Working Group's comments and would be issued in the next few days.</li> <li>• AP34: Mr Neil Gibbney noted that there is currently no capacity on the SWIN in total for adding either a 160MW unit or a combination of smaller units. Dr Gould questioned whether there was less than 40MWs capacity. Mr Gibbney noted that he was unsure.</li> </ul> <p>With regard to whether it is likely to be lower cost to add a 160 MW plant as a single unit, Mr Gibbney noted that the simplistic view is that economies of scale would make it cheapest to develop at a single site. In particular, deep augmentation costs have been largely dominated by transmission costs in previous years. If a developer can build a plant closer to its load then it could be cheaper, however there are limitations on the available locations to build. Mr Gibbney noted that there is no obvious benefit in moving towards smaller units. The Chair agreed and suggested that the Consultant might be able to identify further issues.</p> <p>Mr Gibbney noted that even the smallest transmission lines displaying reasonable economies of scope and scale have a capacity of 250MW, which is considerably more capacity than required by a new 160MW generator. Further, augmentations to the transmission network actually tend to be even more 'lumpy' in nature in that new transmission lines can quite easily have capacities around 750MW. Consequently, the most significant issue is not what a new line costs, but how you allocate the costs to each customer. Mr Gibbney noted that under the Access Code once a new transmission facility is added to Western Power's capital base then Western Power can no longer charge capital contributions for use of that facility and new generators can essentially get a free connection.</p> <p>The Chair noted that it needs to be considered whether the growth is organic load growth or driven by industrial development. The Chair noted that a simple solution to this issue should not be expected and that this will be a challenging task for the Consultant to consider. The Chair noted that the fundamental issue is with the regulatory environment and that the Working Group does not have the mandate to change this. However the Working Group may develop a view that could support a change in the future.</p> <p>Mr Nenad Ninkov questioned the impacts of adopting this</p>	

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	<p>philosophy if a high capacity line is built up north prior to the next 5 year review of the MRCP. The Chair suggested that the Working Group should take a step back and consider how these uncertainties impact on the MRCP determination. The Chair suggested that the long term view would be to reduce volatility but that this would be at the expense of accuracy.</p> <p>Mr Gibbney noted that the price needs to reflect the actual costs an investor is imposing on the market. The Chair noted that these costs are dependent on the investor's position in the Access Queue (as this would determine whether they are attributed all or no costs). Mr Gibbney suggested that the ERA needs to consider this issue further. The Chair questioned whether the Working Group is assuming that this process should operate within the current regulatory regime or propose amendments to the regime. The Chair noted that this decision needs to be guided by the outcomes of the Consultant's work. The Chair noted that the recommendation of the Working Group could be presented to the MAC for further consideration at a later stage.</p> <p>Mr MacLean proposed that if in any year there is spare capacity for building a 40MW unit this could be the basis for setting the MRCP rather than the 160MW which requires an upgrade. Mr Gibbney noted that Western Power would not know if they could connect 40MW units more easily as the costings are based on actual estimates providing to investors, who tend to come with larger units for estimates.</p> <p>Mr Dykstra noted that volatility in price creates issue for existing Market Participants who want consistency. Mr Dykstra suggested that a variable capacity price option may result in a better outcome. That is the price a Market Participant would be paid for capacity would be based on the market price when they first entered the market. Mr Gibbney noted that this type of pricing mechanism could have investors waiting for an opportunistic price. Mr Dykstra noted that if a plant enters the market early then the market is paying for its capacity when it might not be actually required.</p> <p>The Chair noted that the Working Group is considering whether the current assumptions are relevant and that there will be a strategic wash-up at the end of the process. The Chair stated that these issues come back to the question of whether the current complexities and regulatory framework provide reasons to undertake further analysis of smaller units. The Chair considered that there is no reason to analyse the impact of smaller units at this time and therefore the Working Group should continue under the same assumptions, subject to the advice of the Consultant.</p> <p><i>Agreed Outcome: The power station capacity to remain at single 160MW plant, pending outcomes of Consultants work.</i></p>	

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4	<p><b>REVIEW OF MRCP COMPONENTS</b></p> <p>The Working Group continued to discuss the components of the MRCP. A summary of this discussion is presented below:</p> <p><u>Power station – type</u></p> <p>Mr Ruthven noted that the inclusion of inlet coolers would impact on the summer de-rating factor. In particular, the Chair outlined the Working Group’s options were to either:</p> <ul style="list-style-type: none"> <li>• lock in the specific type of inlet cooler and associated de-rating factor; or</li> <li>• to require a Consultant to review the applicable type of inlet cooler and appropriate de-rating factor each year as part of the annual review.</li> </ul> <p>Dr Gould questioned whether there are significant variations between the available technologies for inlet cooling. Mr MacLean noted that it depends mainly on the intensity of the cooling being undertaken.</p> <p>Mr Dykstra suggested not specifying the type of technology as it would allow for technological changes over time. Mr Huppatz noted that there would need to be an assumption made for the humidity level for the determination of the de-rating factor.</p> <p>The Chair clarified that SKM had previously used its worldwide database of project costs by normalising this information and made adjustments for additional costs incurred for difficult projects. The Chair suggested that a similar basis could be used to determine the inlet cooling costs. The Chair suggested that a Consultant could be requested to determine a year on year optimal outcome including cooling or alternatively they could be requested to conduct a review and then present back to the Working Group on the technology types and related de-rating factors, which could be used to set a specific value either across all technology types (if similar) or for individual types. The Chair noted that there may be merit in getting the Consultant to complete a year-by-year assessment as this would allow for technological changes to be accounted for.</p> <p>Mr Campillos noted that it was not advisable to prescribe technologies but rather the Working Group should leave it open so other technologies can be taken into account in future reviews.</p> <p>The Chair suggested amending the Market Procedure to allow for the inclusion of inlet cooling in the power station costs, with the ability for the Consultant to specify the most cost effective technology type.</p> <p><i>Agreed Outcome: The Market Procedure be updated to allow for the inclusion of inlet cooling in the power station costs, with the ability for the Consultant to specify the most cost-effective technology type.</i></p> <p>Mr Cremin noted that every assumption that the Working Group</p>	

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	<p>changes impacts on the final cost balance. The Chair noted that the Working Group needs to consider a range of options. In particular, the Chair suggested requiring the Consultant to review sample humidity rates on 41 degree days across a range of locations to get an estimate of humidity impacts. The Chair noted that this may only need to be considered once in order to obtain an assessment of the variability introduced by differing humidity levels. Mr Huppatz agreed that this would be of value to the market.</p> <p>Mr Williams noted that there was a further issue for Market Generators as they could currently be required to complete Reserve Capacity Tests over winter and if the humidity is high this could be difficult. The Chair suggested a small review project be initiated to understand the relationships with humidity. The Chair noted that the outcomes of the Working Group would not be contingent on this being completed. The Working Group agreed that a review should be conducted and that it would not impact on its current wider review.</p> <p><i>Action Point: The IMO to initiate a review of the relationship between humidity rates and generator output across a range of locations.</i></p> <p><u>Power station – capacity</u></p> <p>The Chair noted that this had already been discussed under agenda item 3.</p> <p><u>Location- cost optimisation</u></p> <p>Mr Ruthven noted that the MRCP considers the next unit to be installed on the grid and that the most cost-effective locations for this marginal unit should be determined. Mr Ruthven noted that this has been the approach in the past but is not prescribed in the Market Procedure.</p> <p>Mr Ruthven noted that transmission and land costs would be combined for each location as part of the selection of the location.</p> <p>The Chair questioned whether the Working Group had previously agreed on not optimising the outcomes and so taking the cheapest land and location. Mr MacLean confirmed that this was previously agreed.</p> <p>The Chair also questioned whether uplift factors should be used to account for variation in construction costs at different locations. Mr Cremin suggested requesting the Consultant to consider this as well for different sites. Mr Ruthven stated that the Rawlinsons Australian Construction Handbook provided uplift factors that, while not specific to power station development costs, could be used for this purpose.</p> <p>Mr Gibbney noted that the Rawlinson’s uplift factors had been considered by Wester Power to be quite general. Mr Ruthven noted that Rawlinson’s had been used by Wester Power to estimate rural construction costs for the 2009 MRCP process. Mr Gibbney noted that previously SKM have come up with their own</p>	<p style="text-align: center;"><b>IMO</b></p>

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	<p>factors. The Chair agreed that the factors that are used by the Consultant would be published as part of the report.</p> <p><i>Agreed Outcome: The IMO to require the Consultant to provide uplift factors for construction costs in the specified location.</i></p> <p><u>Margin M ( legal, insurance, financing, environmental approval costs)</u></p> <p>Mr Ruthven noted that the Working Group needs to consider whether the current methodology is correct. In particular, there is currently a disconnect between section 1.12 and the final equation in the Market Procedure. Mr Ruthven noted that an amendment to the Market Procedure is required to clarify the link between these two sections.</p> <p>The Chair also noted that there is a double counting of debt issuance costs and that the Consultant selected to review the WACC methodology will be requested to consider this.</p> <p>Mr Dykstra noted that there is currently no methodology prescribed in the Market Procedure. In particular, Margin M has generally been 20 percent and 12.5 basis points for finance. Mr Dykstra noted that this has not changed significantly since the global financial crisis and that there is general recognition is that this is a generous allowance.</p> <p>The Chair noted that Margin M is applied to the cost of a project and that the Working Group needs to consider how to define these terms from a procedural aspect. The Chair questioned whether anything else that should be included or whether simply specifying a value to apply is appropriate given the variability in types of project. In particular the Chair questioned how investors account for this in terms of project development costs.</p> <p>Mr Dykstra noted that the financing variable should be removed as it is dealt with more appropriately elsewhere. Mr Dykstra questioned whether the estimate of power station costs typically include contingencies. The Chair did not recollect this being the case. Mr Ruthven clarified that these are based on actual project costs so if projects struck contingencies then these were accounted for by adjusting for difficult projects. The Chair agreed to confirm with SKM what was included in its assessment.</p> <p>Mr MacLean questioned whether SKM use actual project costs or an estimate. The Chair indicated he understood that they use actual project costs and there would be an expectation that average exposure is factored into these costs.</p> <p><i>Action Point: The IMO to seek clarification from SKM on the components included and excluded in its assessment and seek advice on whether they consider there is a better way to determine Margin M.</i></p> <p><u>Contingency margin</u></p> <p>The Working Group agreed that the contingency margin would be included in the request to SKM to provide details on the</p>	<p style="text-align: center;"><b>IMO</b></p>

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	<p>components included/excluded in its assessment and provide advice on the determination of Margin M costs</p> <p><u>WACC-basis</u></p> <p>Mr Ruthven noted that the determination of the WACC based on the assumption that an auction was held had been discussed at the 8 September MAC Meeting. The MAC had requested the IMO to undertake an assessment of the impact on the MRCP of removing the assumption that an auction is held. Mr Ruthven noted that the IMO is currently undertaking this assessment and will present its results back to the MAC.</p>	
5	<p><b>GENERAL BUSINESS</b></p> <p>There was no general business raised.</p>	
6	<p><b>NEXT MEETING</b></p> <p>Mr Ruthven noted that the members would be advised of the details of the next Working Group meeting closer to the date, depending on the status of the Consultants' work on the two reports on transmission connection and the WACC.</p>	
7	<p><b>CLOSED:</b> The Chair declared the meeting closed at 4.20 pm.</p>	