

Independent Market Operator

MRCPWG

Agenda

Meeting No.	4
Location:	IMO Board Room, Level 3, Governor Stirling Tower, 197 St Georges Terrace, Perth
Date:	Monday, 23 August 2010
Time:	Commencing at 12.00 to 2.00pm

Item	Subject	Responsible	Time
1.	WELCOME AND APOLOGIES / ATTENDANCE	Chair	5 min
2.	MINUTES OF PREVIOUS MEETING	Chair	5 min
3.	ACTIONS ARISING	Chair	5 min
	a) Comments on Scope of Works	IMO	15 min
4.	REVIEW OF MRCP COMPONENTS	IMO	60 min
5.	GENERAL BUSINESS	IMO	5 min
6.	NEXT MEETING Monday 30 August 2010 (3:00-5:00pm)	Chair	5 min

Independent Market Operator

MRCPWG

Minutes

Meeting No.	3
Location:	IMO Board Room Level 3, Governor Stirling Building, 197 St Georges Terrace, Perth
Date:	Friday 2 July 2010
Time:	Commencing at 2:00 to 4:00pm

Attendees	
Troy Forward	IMO (Chair)
Ben Williams	IMO (proxy)
Fiona Edmonds	IMO (Minutes)
Corey Dykstra	Market Customer
John Rhodes	Market Customer (proxy)
Steve Gould	Market Customer
Patrick Peake	Market Generator
Shane Cremin	Market Generator
Brad Huppertz	Market Generator
Pablo Campillos	DSM Aggregator
Nenad Ninkov	New Investor
Neil Gibbney	Western Power
Matthew Fairclough	System Management (proxy)
Chris Brown	Economic Regulation Authority (ERA) (Observer)
Other Attendees	
Monica Tedeschi	IMO (Observer)
Rob Pullella	ERA (Observer) (3.05-4.00pm)
Apologies	
Stephen MacLean	Synergy
Alistair Butcher	System Management
Greg Ruthven	IMO

Item	Subject	Action
1.	WELCOME AND APOLOGIES / ATTENDANCE The Chair opened the 3rd meeting of the Maximum Reserve Capacity Price (MRCP) Working Group (Working Group) at 2:00pm.	

Item	Subject	Action
	<p>Apologies were received from:</p> <ul style="list-style-type: none"> • Alistair Butcher – System Management; • Stephen MacLean – Synergy; and • Greg Ruthven – IMO. <p>The following other attendees were noted:</p> <ul style="list-style-type: none"> • John Rhodes (Proxy for Stephen MacLean); • Matthew Fairclough (Proxy for Alistair Butcher); • Ben Williams (Proxy for Greg Ruthven); • Monica Tedeschi (Observer); and • Rob Pullella (Observer). <p>The Chair introduced Monica Tedeschi as the IMO's Graduate Analyst and requested for Miss Tedeschi to attend Working Group meetings as an Observer. The Working Group agreed for Miss Tedeschi to attend meetings as an Observer.</p>	
2.	<p>MINUTES OF PREVIOUS MEETING</p> <p>The minutes of the 2nd MRCP Working Group meeting, held 22 June 2010, were circulated prior to the meeting.</p> <p><u>Page 4: Section 5: Review of MRCP Components</u></p> <p>Mr Brad Huppertz requested the following amendment:</p> <p>“Mr Brad Huppertz noted that the market is put at risk if there are no components <u>proponents</u> ...”</p> <p>Mr Matthew Fairclough requested the following clarification be included:</p> <p>“Mr Alistair Butcher questioned whether it is premature to seek consultancy advice if the Working Group has not yet agreed whether costs should be optimised <u>or based on a real or hypothetical power station.</u>”</p> <p>Mr Corey Dykstra requested the following sentence be amended and moved to the section of the minutes on deep connection costs:</p> <p>“Mr Dykstra noted that the attribution of deep connection costs will <u>may</u> be partially set by the Western Australian regulatory framework. Mr Dykstra also noted that the ERA is likely to be interested in an answer to this.”</p> <p><u>Page 5: Section 5: Review of MRCP Components</u></p> <p>Mr Fairclough requested the following clarification be included:</p> <p>“...deep connection costs would be expected to be less than being built else where, <u>but deep connection costs may be very location specific.</u>”</p> <p>Mr Dykstra requested the following amendment:</p>	

Item	Subject	Action
	<p>“The Working Group agreed that Western Power is the <u>would be the</u> appropriate party...</p> <p>Agreed Outcome: Western Power is the appropriate party to determine <u>Shallow connection costs to be provided by Western Power.</u>”</p> <p><u>Page 6: Section 5: Review of MRCP Components</u></p> <p>Mr Dykstra requested the following deletion:</p> <p>“Mr Dykstra noted that an efficient level of investment needs to be encouraged.”</p> <p><u>Page 7: Section 5: Review of MRCP Components</u></p> <p>Mr Chris Brown requested the following deletion:</p> <p>“In response the Chair noted that that if ...”</p> <p><i>Action Point: The IMO to amend the minutes of Meeting 2 to reflect the points raised by the Working Group and publish on the website as final.</i></p>	<p style="text-align: center;">IMO</p>
<p style="text-align: center;">3</p>	<p>ACTION POINTS</p> <p>The actions arising were either complete or on the meeting agenda. The following exceptions were noted:</p> <p>Action Item 9 – Mr Ben Williams noted that this action item was now complete with the Scope of Works: Calculation Methodology to be applied in determining deep connection costs on the agenda for discussion during today’s Working Group meeting.</p> <p>Action Item 10 – Mr Williams noted that in the case where no Market Participants bid into the Reserve Capacity Auction then the price will be set at 85% of the MRCP.</p> <p>Action Item 11 – Mr Williams noted that this action item was now complete with the Scope of Works: Calculation Methodology to be applied in determining the Weighted Average Cost of Capital (WACC) on the agenda for discussion during today’s Working Group meeting.</p> <p>Action Item 13 – Mr Dykstra queried whether it may be more efficient for the IMO to get advice from LandCorp on what services it could provide the Working Group and distribute to members. The IMO agreed to amend the action item to reflect this.</p> <p><i>Action Point: The IMO to update the MRCPWG Action Point register as follows:</i></p> <p><u>“Action Item 13: The IMO request advice from to organise for LandCorp to present to the Working Group on what services it can offer for the purposes of determining the MRCP. The IMO to distribute advice to Working Group members for their consideration.”</u></p>	<p style="text-align: center;">IMO</p> <p style="text-align: center;">IMO</p>

Item	Subject	Action
4a	<p>SCOPE OF WORKS: CALCULATION METHODOLOGY TO BE APPLIED IN DETERMINING DEEP CONNECTION COSTS</p> <p>The IMO presented the scope of works it had prepared for the review of deep connection costs. The following points were raised by members:</p> <ul style="list-style-type: none"> • Mr Neil Gibbney noted that the outcomes and implication of New Facility Investment Test (NFIT) and the capital contributions policy is a large consideration. Mr Gibbney suggested the ERA provide further guidance on whether the Consultant should review whether the recommended calculation methodology would pass both the NFIT and capital contributions policy. • Mr Gibbney noted that the scope of works does not state that the solution needs to be consistent with the Market Objectives. In response, Mr Shane Cremin noted that there is no direct relationship with the Wholesale Market Objectives and that the technical code may be more relevant for deep connection costs. <p><i>Action Point: The IMO to amend the Scope of Works to include a link to the Technical Rule requirements.</i></p> <ul style="list-style-type: none"> • Mr Cremin questioned whether a prescriptive outcome was being sought and whether the ERA should develop a similar method to enhance transparency of the transmission process. In response, Mr Chris Brown noted that this would require a different framework to be developed. • Mr Pablo Campillos noted that a side-by-side comparison of Wester Power's current calculation and any identified alternative methods would be beneficial. Mr Dykstra noted that any alternative approaches will need to be within the constraints of the current regulatory environment. Mr Cremin noted the difficulties in identifying the net benefits resulting from construction at different sites. • Mr Dykstra noted that the scope of works should be more precise as to what needs to be reviewed by the Consultant. • Mr Campillos suggested expanding the assumptions to cover those made by both the IMO and Western Power. <p><i>Action Point: The IMO to amend the scope of works to cover the assumptions made by both the IMO and Western Power.</i></p> <ul style="list-style-type: none"> • Mr Nenad Ninkov questioned whether the Consultant would provide estimates of deep connection costs. The Working Group agreed that the purpose of the Consultant's work is to develop an appropriate methodology, present the methodology and re-calculate the 2009 results using the amended methodology. Mr Fairclough questioned whether the Consultant would review the methodology to determine whether it would pass both the capital contribution policy and Western Power's NFIT test. Mr Brown agreed that the review should cover this. <p><i>Action Point: The IMO to circulate to Working Group members a</i></p>	<p>IMO</p> <p>IMO</p> <p>IMO</p>

Item	Subject	Action
	<p><i>word version of the Scope of Works: Calculation Methodology to be applied in determining Deep Connection Costs</i></p> <p><i>Action Point: Working Group members to provide suggested amendments to the IMO on the Scope of Works: Calculation Methodology to be applied in determining Deep Connection Costs by 23 July 2010.</i></p> <ul style="list-style-type: none"> Mr Ninkov suggested that a definition of deep connection costs should be developed. Mr Brad Huppertz questioned if a Market Participant can appeal to the ERA or Western Power if it disagrees with Western Power's decision of what a deep connection cost is. Mr Dykstra noted that it is a responsibility of the connecting generator to determine if the value is consistent with the regulatory requirements for determining the values when it is provided the quantum of capital contribution. <p><i>Action Point: The IMO to develop a definition of deep connection costs and provide to Working Group members for review.</i></p> <p><i>Action Point: The IMO to include a request for details of the regulatory regime in the Scope of Works: Calculation Methodology to be applied in determining Deep Connection Costs.</i></p>	<p>Working Group</p> <p>IMO</p> <p>IMO</p>
4b	<p>SCOPE OF WORKS: CALCULATION METHODOLOGY TO BE APPLIED IN DETERMINING THE WEIGHTED AVERAGE COST OF CAPITAL</p> <p>The IMO presented the scope of works it had prepared for the review of the WACC methodology. The following points were raised by members:</p> <ul style="list-style-type: none"> Mr Dykstra questioned why the Working Group would be asking the same questions regarding the methodology again unless the situation had changed since the last review. Mr Williams noted that during the 2009 review the Consultant had suggested new Major parameters; as a result the IMO wants the Consultant to review whether these are appropriate. Mr Williams also noted that the inclusion of debt financing costs in both the margin M and WACC variables means that there is potential double counting currently. The Chair noted that the construct of the Market Rules needs to be taken into account when preparing the WACC. One of the questions to be answered is whether the risk component in the WACC should take into account the risk of not going into the auction. The Chair noted that the determination by the Allen Consulting Group three years ago didn't take into account the risk of not getting the project funded at all because it does not enter the auction. Mr Dykstra noted that this is a project-specific risk and should be determined for the set of activities associated with the organisation. Mr Dykstra stated that it is for this reason that the set of similar companies is used in the methodology for determining the WACC. Mr Rob Pullella questioned whether the original study took into account a similar company in the National Electricity 	

Item	Subject	Action
	<p>Market (NEM) as they would not face the same risk as in the WEM (Equity Beta). Mr Pullella suggested that risk may be higher than in the NEM. Mr Cremin disagreed, stating that a Market Participant could potentially lose all its Capacity Credits in one or two months. Mr Pullella noted NEM participant are not paid an income associated with Capacity Credits.</p> <ul style="list-style-type: none"> • Mr Brown suggested that the assumption for MRCP is that a proponent is a single project. Mr Pullella considered that the equity beta should be lower in the WEM than the NEM as there is a capacity market. Mr Patrick Peake noted that difference in the WEM is that Capacity Credits could be the sole income of a generator. • Mr Peake noted that the money that a proponent could receive from the auction needs to be enough to cover previous development work. While this is a risk to all developers in the WEM, if capacity is to be encouraged onto the market then this needs to be taken into account. Mr Peake suggested that project specific risk could be incorporated into the margin M calculation. • Mr Campillos suggested that the risk of not getting the project up in time might be included across a proponent's entire development portfolio which would potentially inflate costs. • The Chair questioned when the outcomes from the original review undertaken by the Allen Consulting Group should be maintained. Mr Ninkov noted the Working Group needs to decide if the WACC is based on a single stand-alone facility or one which comprises part of a portfolio. • Mr Dykstra noted that there will be a wide range of values for the asset and beta variables for each of the companies in the comparator companies list. Mr Dykstra noted that the Working Group needs to make a decision as to whether the entry of new units into the WEM is more or less risky than other activities. The Chair suggested that the Consultant provide advice on how the WACC is determined. The Chair noted that in appointing a Consultant to undertake the review a competitive tender process will be undertaken. <p><i>Action Point: The IMO to provide a copy of the Allen Consulting Group initial review and the Word document for the Scope of Works: Calculation Methodology to be applied in determining the WACC to Working Group members.</i></p> <p><i>Action Point: Working Group members to provide comments on the Scope of Works: Calculation Methodology to be applied in determining the WACC (in particular the definition of margin M) and on whether the Allen Consulting Group's initial recommendations are still valid by 23 July 2010.</i></p>	<p style="text-align: center;">IMO</p> <p style="text-align: center;">Working Group</p>
5	<p>REVIEW OF MRCP COMPONENTS</p> <p>The Working Group continued to discuss the components of the MRCP which may require the input of consultants.</p> <p><u>Power Station – Capacity (160MW assumption)</u></p> <ul style="list-style-type: none"> • Mr Williams noted that the deep connection costs associated 	

Item	Subject	Action
	<p>with a 160MW unit may not be the same as those encountered in connecting a 155MW unit and suggested the Consultant consider whether the value of 160MW be explicitly stated or if variation around this value should be allowed. Mr Steve Gould agreed that this was an issue. The Chair suggested that the sensitivity around the review of 2009 numbers would change if the 160MW basis is amended by incremental amounts. The Chair noted that this would be a scoping exercise and not undertaken each year.</p> <ul style="list-style-type: none"> • Mr Cremin noted although there are likely to be large deep connection costs associated with building a 160MW unit it is unlikely that one will be connected as there are currently no appropriate sites available. As a result smaller units are more likely to enter the market. The Chair noted that problem with investing in infrastructure is a much larger issue which is outside the scope of the Working Group. • Mr Fairclough noted that the 160MW level was set in 2005 when the system had the capacity to connect new units. Mr Fairclough questioned whether this initial assumption is still relevant given system constraints. Mr Ninkov noted that the Working Group is developing a methodology for determining the MRCP to apply for the next five years during which further units are likely to enter the WEM. Mr Williams noted that the methodology should be robust to changes in circumstances. Mr Dykstra noted that the methodology should be simple and reflect a reasonable process. As size of the unit being connected to the system will drive the deep connection costs the Working Group agreed that this issue needs to be discussed and resolved prior to the Consultant undertaking the review. • Mr John Rhodes questioned the size of units which have been recently entering the WEM. The Chair clarified that these have generally been smaller units. • The Chair noted that a notional unit of 40MW is used for the purposes of the determination of the Energy Price Limits. It was noted that a 40MW unit is not inconsistent with providing load following services. Mr Cremin noted that if a proponent builds a smaller machine they will still have similar overheads associated with transmission connection. The Chair suggested that the Working Group could look at using the Statement of Opportunities for these purposes, including reserve (load) forecasting. The Chair also noted that the first MRCP review included a price/quantity curve on a megawatt basis and that the price determined fitted well with 160MW band. • Mr Campillos questioned whether the Working Group should review the likeliness of a new entrant wanting to connect a 160MW plant given the current transmission constraints. In response, Mr Williams noted that the MRCP needs to apply for the next 5 years and should therefore be dynamic. Mr Williams suggested that an optimised model should be considered as it would allow for changes in the costs of transmission for different sized generators. Mr Dykstra noted that the Working Group needs to determine what the incremental block of capacity to secure in a shortfall situation 	

Item	Subject	Action
	<p>would be. Mr Dykstra noted that the second stage issue relates to the appropriate way to secure the required capacity. Mr Dykstra noted that a clear Market Procedure is a prerequisite to assisting this process.</p> <ul style="list-style-type: none"> • Mr Ninkov noted that the Working Group needs to take into consideration what size of unit would most likely be offered into the auction. Mr Ninkov considered that it is most likely that only a large plant will be progressed far enough through the process to enter into the auction (e.g. have their finance organised, approvals etc). • Mr Cremin questioned whether the MRCP should be a price cap, similar to the methodology adopted in determining the Energy Price Limits. The Chair noted that the IMO needs to provide a reasonable price that would allow someone to recover capital cost and make a reasonable return. Mr Peake noted that as network costs of development are high it would be useful to be provided with estimated costs and build sites from Western Power. <p><i>Action Point: The IMO to provide Working Group members with a copy of the work previously undertaken by Sinclair Knight Merz for the first MRCP review.</i></p> <p><i>Action Point: The IMO to undertake analysis of native demand growth, excluding block loads, and provide to Working Group members by 23 July 2010.</i></p> <p><i>Action Point: Perth Energy to provide the IMO with details of the cost curve for a gas turbine by 14 July 2010. The IMO to distribute this material to Working Group members.</i></p>	<p style="text-align: center;">IMO</p> <p style="text-align: center;">IMO</p> <p style="text-align: center;">Perth Energy</p>
6	<p>GENERAL BUSINESS</p> <p>There was no general business raised.</p>	
7	<p>NEXT MEETING</p> <p>The next Working Group meeting is currently scheduled to be held Tuesday 17 August 2010 (3:00-5:00pm).</p> <p><i>Action Point: The IMO to confirm the next meeting date and provide details to all Working Group members.</i></p>	IMO
8	<p>CLOSED: The Chair declared the meeting closed at 4.00 pm.</p>	



Agenda Item 3: MRCPWG - Action Points

Legend:

Unshaded	Unshaded action points are still being progressed.
Shaded	Shaded action points are actions that have been completed

#	Meeting Arising	Responsibility	Action	Status/Progress
5	Meeting 1	IMO	The IMO to amend Market Procedure for determining the MRCP to reinstate the 2009 MRCP Major Component values.	Underway. The proposed revised Market Procedure (PC_2010_04) is currently out for public consultation until 6 September 2010.
12	Meeting 2	IMO	The IMO to provide back to the MAC for consideration the Working Group's suggestion that a review of the assumption that an auction is held for the purposes of the determination of the WACC be included in the Market Rules Evolution Plan.	Pending.
13	Meeting 2	IMO	The IMO request advice from LandCorp on what services it can offer for the purposes of determining the MRCP. The IMO to distribute advice to Working Group members for their consideration.	Completed. The IMO advised Working Group members on 27 July 2010 that LandCorp has advised that it does not provide land valuation services.
14	Meeting 2	Working Group members	Working Group members to consider out of session if consultancy work is required on any further components identified in Agenda Item 5.	Completed. No further suggestions were received from Working Group members during Meeting 2.

Meeting No 4: 23 August 2010

#	Meeting Arising	Responsibility	Action	Status/Progress
15	Meeting 3	IMO	The IMO to amend the minutes of Meeting 2 to reflect the points raised by the Working Group and publish on the website as final	Completed.
16	Meeting 3	IMO	The IMO to amend the Scope of Works: Calculation Methodology to be applied in determining Deep Connection Costs to include a link to the Technical Rule requirements.	Completed.
17	Meeting 3	IMO	The IMO to amend the Scope of Works: Calculation Methodology to be applied in determining Deep Connection Costs to cover the assumptions made by both the IMO and Western Power.	Completed.
18	Meeting 3	IMO	The IMO to circulate to Working Group members a word version of the Scope of Works: Calculation Methodology to be applied in determining Deep Connection Costs.	Completed.
19	Meeting 3	Working Group	Working Group members to provide suggested amendments to the IMO on the Scope of Works: Calculation Methodology to be applied in determining Deep Connection Costs by 23 July 2010.	Completed. Date for comments was updated to 28 July 2010. The comments received by Working Group members and the IMO's response are presented in Agenda Item 3 a).
20	Meeting 3	IMO	The IMO to develop a definition of deep connection costs and provide to Working Group members for review.	Completed. The definition of deep connection costs previously adopted by the IMO was included in the Scope of Works: Calculation Methodology to be applied in determining Deep Connection Costs.
21	Meeting 3	IMO	The IMO to include a request for details of the regulatory regime in the Scope of Works: Calculation Methodology to be applied in determining Deep Connection Costs.	Completed.
22	Meeting 3	IMO	The IMO to provide a copy of the Allen Consulting Group initial review and the word document for the Scope of Works: Calculation Methodology to be applied in	Completed.

Meeting No 4: 23 August 2010

#	Meeting Arising	Responsibility	Action	Status/Progress
			determining the WACC to Working Group members.	
23	Meeting 3	Working Group	Working Group members to provide comments on the Scope of Works: Calculation Methodology to be applied in determining the WACC (in particular the definition of margin M) and on whether the Allen Consulting Group's initial recommendations are still valid by 23 July 2010.	Completed. Date for comments was updated to 28 July 2010. The comments received by Working Group members and the IMO's response are presented in Agenda Item 3 a).
24	Meeting 3	IMO	The IMO to provide Working Group members with a copy of the work previously undertaken by Sinclair Knight Merz for the first MRCP review.	Completed.
25	Meeting 3	IMO	The IMO to undertake analysis of native demand growth, excluding block loads, and provide to Working Group members by 23 July 2010.	Completed. The IMO provided Working Group members with a copy of its analysis on 27 July 2010.
26	Meeting 3	Perth Energy	Perth Energy to provide the IMO with details of the cost curve for a gas turbine by 14 July 2010.	Completed. A graphical representation of this information is provided as Agenda Item 3 Appendix 3.
27	Meeting 3	IMO	The IMO to confirm the next meeting date and provide details to all Working Group members.	Completed. The Working Group meeting was rescheduled to 12:00-2:00pm on Monday 23 August.

Agenda Item 3a: Scope of Works Comments

1. BACKGROUND

At the third Maximum Reserve Capacity Price (MRCP) Working Group (MRCPWG) meeting on 2 July 2010 the Working Group members agreed to provide comments on the following Scope of Works:

- Calculation Methodology to be applied in determining Deep Connection Costs; and
- Calculation Methodology to be applied in determining the Weighted Average Cost of Capital

An overview of the comments received from members is presented in section 3 below, along with the IMO's response. A copy of the updated Scope of Works is presented as an Appendix A.

2. PROCESS FROM HERE

The IMO recommends that the MAC:

- **Note** the IMO's response to the suggested amendments to the scope of works; and
- **Agree** that the IMO go out for tender for both of these pieces of work

Scope of Works	Submitter	Issue/Section	Comment/Recommendation	IMO's response
WACC	Corey Dykstra (Alinta)	General	Much of the scope seeks to revisit the work ACG has already completed. Does not seem cost effective.	The IMO agrees with the comments of both Mr Dykstra and Mr Brown, on behalf of the ERA Secretariat, that there is potentially no need for undertaking a complete review of the methodology for calculating the WACC. As a result the IMO has amended the Scope of Works to only review aspects of the methodology where a recognised change in the regulatory space has occurred that would impact on the advice provided in the last major review, e.g. gamma variable.
WACC	Corey Dykstra (Alinta)	General	Would not support the WACC scope of work (even with the changes marked up) being released to the market for quotes at this stage.	Refer to the above response
WACC	Corey Dykstra (Alinta)	General	Considers that the Scope of Works needs to be rethought, despite the suggested amendments.	Refer to the above response
WACC	Chris Brown (ERA)	General	The Working Group should consider modifying its Scope of Work	Agreed. Refer to the above response
WACC	Chris Brown (ERA)	Breadth of Scope	Would like to better understand the rationale for engaging a Consultant to review the method of calculating the WACC in its entirety given that there appear to be no major changes to relevant market settings since the ACG report.	Agreed. Refer to the above response
WACC	Chris Brown (ERA)	Breadth of Scope	Suggests that the MRCPWG should consider limiting the scope of work for the method of calculating the WACC to the particular concerns raised by the group. In the context of	The Scope of Works has been updated to reflect the Secretariats suggestions.

Scope of Works	Submitter	Issue/Section	Comment/Recommendation	IMO's response
			<p>addressing these concerns, the scope should require the consultant to:</p> <ul style="list-style-type: none"> propose any necessary changes to the current method of calculating parameters for the WACC in determining the MRCP; provide a rationale for any proposed changes to the method's parameters, assumptions, calculation and application of the WACC in determining the MRCP; and propose values for all of the method's parameters. 	
WACC	Chris Brown (ERA)	Beta Value	<p>Recommends that the scope should explicitly require the consultant to determine the appropriate beta value to be applied for a generator in the WA market, particularly given the existence of the capacity market.</p>	<p>The Scope of Works has been updated to require the Consultant to determine the appropriate beta value to apply in the WA market.</p>
WACC	Chris Brown (ERA)	Beta Value	<p>Given the purpose of the MRCP, and noting that similar companies are typically used as comparators for WACC parameters such as beta (a risk measure of how sensitive a security is to market movements) there is a need to ensure that any such comparisons and derived proxy values are rational and reasonable.</p>	<p>The Scope of Works has been updated to include assessing whether any comparisons to similar companies (particularly NEM comparator companies) and derived proxy values are rational and reasonable for the WEM context.</p>

Scope of Works	Submitter	Issue/Section	Comment/Recommendation	IMO's response
WACC	Chris Brown (ERA)	Beta Value	Concerned with use of NEM comparators for the WEM. In particular because the capacity market reduces the risks normally faced by participants in markets such as the NEM, it is questionable whether the corresponding beta values are valid and appropriate for application in the WEM context, particularly in setting the MRCP.	Refer to the above response.
WACC	Chris Brown (ERA)	Beta Value	Generators in the WEM could be considered to face lower risks than their counterparts in the NEM.	Refer to the above response.
WACC	Chris Brown (ERA)	Beta Value	The proposed scope of work should seek to have the use of NEM comparators for the WEM explicitly discussed and resolved to ensure that an appropriate WACC is used in the determination of the MRCP.	Refer to the above response.
WACC	Corey Dykstra (Alinta)	Background Section	Suggests amending the explanation of the MRCP to state that it is "used in determining capacity refunds"	The Scope of Works has been updated to incorporate Mr Dykstra's suggestion.
WACC	Corey Dykstra (Alinta)	Background Section	Suggests the following amendment: <u>"The Market Rules require that the purpose of the MRCP is to incentivise an investor to propose to reflect the estimated annualised cost of building a 160 MW Open Cycle Gas Turbine (OCGT) and that is enter the proposed power station offered into a Reserve Capacity Auction. As such</u>	The IMO has updated the Scope of Works to request the consultant to provide advice on whether the MRCP should incentivise a 160 MW OCGT be provided for auction or cover the estimated costs of building a 160 MW OCGT.

Scope of Works	Submitter	Issue/Section	Comment/Recommendation	IMO's response
			the price MRCP needs to accurately reflect all of the costs which that are likely to be incurred by the proponent in constructing the power station, <u>and making it available to the market.</u> "	
WACC	Corey Dykstra (Alinta)	Background Section	Suggests the following amendment: "As part of this review it has been identified <u>that certain elements of the the assumptions and methodology...</u> "	The Scope of Works has been updated to incorporate Mr Dykstra's suggestion.
WACC	Corey Dykstra (Alinta)	Background Section	Suggests the following amendment: "...provide a report to the IMO on <u>these elements appropriate parameters, assumptions, calculation and application of the WACC in determining the MRCP.</u> "	<p>The IMO considers that it is important that the Scope of Works is explicit with regard to the anticipated outcomes from the Consultant. As a result the IMO has not adopted Mr Dykstra's recommendations.</p> <p>The change proposed by Mr Dykstra also removes the aspects of the scope of works that will allow the IMO to proceduralise the recommendation. This is a key deliverable of the project as this will ensure full transparency of the calculation of the WACC to Market Participants.</p>
WACC	Nenad Ninkov (Pacific Energy Limited)	Background Section	Suggests the following amendment "... propose to build an <u>160 MW Open Cycle Gas Turbine (OCGT) of up to 160 MW (Power Station...</u> As such the price needs to accurately reflect all of the costs <u>(including the rate of return)</u> which <u>is are</u> likely to be incurred by the proponent in constructing the <u>pPower sStation</u> ".	<p>The IMO notes that currently the MRCP is designed around a 160MW OCGT being built. The IMO considers that the proposed amendments require further discussion by the Working Group around power station capacity (Agenda Item 4). The IMO will make any further necessary changes to the Scope of Works following the outcomes of Meeting 4 of the Working Group.</p> <p>The Scope of Works has been updated to include Mr</p>



Scope of Works	Submitter	Issue/Section	Comment/Recommendation	IMO's response
				Ninkov's suggestion to specify that the cost include the rate of return.
WACC	Nenad Ninkov (Pacific Energy Limited)	Background Section	Suggest the following amendment "... determining the <u>total</u> cost of developing the <u>P</u> power <u>S</u> tation."	The Scope of Works has been updated to incorporate Mr Ninkov's suggestion.
WACC	Corey Dykstra (Alinta)	Scope of Work/ Appropriate WACC equation Section	Suggests the IMO remove the requirement for the review to recommend an appropriate WACC equation.	The IMO has amended the Scope of Works to not require an appropriate methodology to calculate the WACC be recommended, unless required as a result of an identified change to the regulatory space or for inclusion of debt and equity margins
WACC	Nenad Ninkov (Pacific Energy Limited)	Scope of Work/Appropriate WACC calculation Section	Suggest the following amendment "... appropriate <u>methodology to calculate WACC equation.</u> "	The Scope of Works has been updated to incorporate Mr Ninkov's suggestion.
WACC	Nenad Ninkov (Pacific Energy Limited)	Scope of Work/Application of the WACC Section	Suggest the following amendment "... building the <u>Power Station OCGT</u> . <u>Currently it is assumed the Power Station takes two years to construct and will enter into a contract with the IMO for a term of 10 years. The WACC is applied throughout this term. The WACC is applied to the entire cost of the project two years before the project is due to be completed.</u> "	The IMO notes that the WACC only applies to the entire cost of the project over the two years of construction and not over a 10 year term if a contract is entered into. As a result the IMO has not adopted Mr Ninkov's suggestion. The Scope of Works has been updated to include Mr Ninkov's suggestion to refer to a Power Station rather than OCGT.
WACC	Corey Dykstra (Alinta)	Scope of Work/ Parameters to be included in the WACC Section	Suggests a complete re-write of this section (not shown in tracked changes) of the scope of works as follows:	The IMO has amended the Scope of Works to incorporate Mr Dykstra's recommendation. The IMO has also maintained the requirement specified in the original Scope of Works for the review to consider:



Scope of Works	Submitter	Issue/Section	Comment/Recommendation	IMO's response
			<p><u>"Value of parameters to be included in the WACC and Capital Asset Pricing Model":</u> The review will need to consider:</p> <ul style="list-style-type: none"> ○ The parameters for which values should be specified in the Market Procedure, the values that should be adopted for these parameters and the basis for these values. <p>For these parameters, the review will need to consider:</p> <ul style="list-style-type: none"> ○ how frequently the specified values for these parameters should be reviewed (e.g. every five years); ○ whether there are defined circumstances that should trigger a review of the specified values despite a scheduled review not yet being due. <ul style="list-style-type: none"> ○ The parameters for which values should not be specified in the Market Procedure, but where the Market Procedure should instead specify processes for establishing values for these parameters. 	<p>"A recommendation detailing if any of the parameters should include a risk margin to incorporate the risk that no Reserve Capacity Auction will be held."</p>



Scope of Works	Submitter	Issue/Section	Comment/Recommendation	IMO's response
			<p>For these parameters, the review will need to consider the potential conflicting objectives of maintaining consistency across time with accuracy.</p> <p>For example, if the Market Procedure was not to specify a value for the equity beta, but instead prescribe a process by which the value of the equity beta was to be annually determined, the review will need to consider:</p> <ul style="list-style-type: none"> ○ the basis on which a set of comparator companies used to derive such an estimate was established; ○ the number of comparator companies to include in the set of comparator companies; ○ whether the set of comparator companies used to derive such an estimate should remain fixed; and ○ whether there would be circumstances under which the set of comparator 	

Scope of Works	Submitter	Issue/Section	Comment/Recommendation	IMO's response
			<p>companies may be changed.</p> <p>In conducting this assessment the Consultant will be required to analyse other parameters included by the IMO in the calculation of the MRCP, especially in regards to the calculation of the margin M parameter. The Consultant will be expected to make a recommendation on whether debt issuance costs are more appropriately included as part of the WACC or as part of Margin M."</p>	
WACC	Corey Dykstra (Alinta)	Scope of Work/ Parameters to be included in the WACC Section	<p>Suggests the following amendment "A section which plainly states the recommendations regarding <u>each of the above matters</u>:-</p> <ul style="list-style-type: none"> • each parameter; • the calculation methodology for each parameter; • when each parameter should be updated; and • the assumptions inherent in each calculation. 	Refer to the previous comment around the necessity of specifying that explicit recommendations be provided.



Scope of Works	Submitter	Issue/Section	Comment/Recommendation	IMO's response
DCC	Corey Dykstra (Alinta)	General	Suggests that the introductory paragraphs should be amended to reflect the suggested changes in the WACC Scope of Works.	The IMO has amended the Scope of Works to reflect the introductory paragraphs in the amended WACC Scope of Works.
DCC	Nenad Ninkov (Pacific Energy Limited)	Background Section	Suggests the following amendment "... propose to build an 160 MW Open Cycle Gas Turbine (OCGT) of up to <u>160 MW (Power Station... constructing the pPower sStation</u> ".	Refer to above response regarding the WACC Scope of Works.
DCC	Nenad Ninkov (Pacific Energy Limited)	Background Section	Suggests including a source of where the definition is to be found of Deep Connection Costs.	The Scope of Works currently includes a definition of Deep Connection Costs.
DCC	Nenad Ninkov (Pacific Energy Limited)	Background Section	Suggest the following amendment "... <u>the capital costs</u> passed on to the connecting generation that are <u>{directly attributable?}</u> with upgrading/augmenting the transmission system to allow for the generator to connect <u>to the SWIS</u> ".	The IMO has amended the Scope of Works to reflect Mr Ninkov's suggestions to refer to capital costs and the connection of a generator to the SWIS. The IMO has not amended the Scope of Works to refer to only that costs that are directly attributable, as the deep connection costs need to capture all of the costs charged by Wester Power associated with upgrading/augmenting the transmission system , irrespective of whether they are directly or indirectly attributable to the project.
DCC	Nenad Ninkov (Pacific Energy Limited)	Background Section	Suggest the following amendment "...deep connection costs <u>require further may need to be reviewed</u> ".	The IMO has amended the Scope of Works to reflect Mr Ninkov's suggestion.
DCC	Nenad Ninkov (Pacific Energy Limited)	Background Section	Suggests including a requirement for the Consultant to define deep connection costs including what is included and excluded and why during the review.	The IMO has amended the Scope of Works to require the Consultant to provide a definition of deep connection costs and include details of what is included and excluded from the definition and the reasons why.



Scope of Works	Submitter	Issue/Section	Comment/Recommendation	IMO's response
DCC	Nenad Ninkov (Pacific Energy Limited)	Scope of Work Section	Suggests the following amendment "Possible Outcomes and implications..."	The IMO has amended the Scope of Works to reflect Mr Ninkov's suggestion
DCC	Neil Gibbney (Western Power)	Scope of Work Section	Suggests the following additional point be taken into account in the calculation methodology: "The nature of the current capacity based market and the associated need to unconstrained network access."	The IMO has amended the Scope of Works to reflect Mr Gibbney's suggestion.

Agenda Item 3: Appendix 1

Scope of Works: Calculation Methodology to be applied in determining Deep Connection Costs

BACKGROUND

The Wholesale Electricity Market Rules (Market Rules)¹ and the Market Procedure for: Determination of the Maximum Reserve Capacity Price² (the Market Procedure) require the IMO to calculate a Maximum Reserve Capacity Price (MRCP) each year. The MRCP sets the maximum offer that can be made in a Reserve Capacity Auction and is used as the basis for [determining](#) an administered Reserve Capacity Price if no auction is required [and capacity refunds](#).

Deleted: s

Deleted: the determination of

The purpose of the MRCP is to incentivise an investor to propose to build a 160 MW Open Cycle Gas Turbine (OCGT) and enter the proposed power station into a Reserve Capacity Auction. As such the price needs to accurately reflect all of the costs which are likely to be incurred by the proponent in constructing the [Power Station](#).

Deleted: p

Deleted: s

Deleted: section 1 of

In particular, [the Market Procedure outlines the principles to be applied and the steps to be taken by the IMO in order to develop and propose the MRCP](#). Section 1.8 details the methodology that Western Power must follow in determining the cost of connecting the Power Station to the SWIS.

Section 1.8.2(i) specifies that “An estimate of deep connection costs must be included”. However, the Market Procedure does not include either a detailed methodology for how this should be calculated or a definition of deep connection costs. To date the IMO has defined deep connection costs as the [capital](#) costs passed on to the connecting generator that are associated with upgrading/ augmenting the transmission system to allow for the generator to connect [to the SWIS](#).

As part of the 2010 MRCP determination, Western Power provided an analysis in support of their calculation of transmission costs associated with the proposed power station. The estimates provided, and the methodology which supported them was a recurring topic in a number of the submissions the IMO received in response to the draft report. These submissions can be found on the IMO website³.

In accordance with clause 4.16.9 of the Market Rules, the IMO is currently reviewing the Market Procedure⁴. As part of this review it has been identified that the assumptions and methodology behind the calculation of the deep connection costs [require further review](#).

Deleted: may need to be reviewed

¹ Available on the IMO website: <http://www.imowa.com.au/market-rules>

² Available on the IMO website: http://www.imowa.com.au/f711,482994/482994_Market_Procedure_for_Maximum_Reserve_Capacity_Price.pdf

³ Available on the IMO website: <http://www.imowa.com.au/mrcp>

⁴ For the 2010 review the IMO commissioned the Allan Consulting Group (ACG) to review the calculation and application of the Weighted Average Cost of Capital in the determination of the MRCP f. This review has been provided as Appendix 2 of this Request for Quotation

To guide this review the IMO wishes to engage a Consultant to provide a report to the IMO on the appropriate [definition \(including the reasons for inclusion and exclusion of each cost\)](#), parameters, assumptions and calculation of estimates of deep connection charges associated with connecting a [Power Station](#) to the SWIS. This report will need to be in the context of the Western Australian Wholesale Electricity Market and be able to be followed by Western Power in calculating an estimate of deep connection charges.

Deleted: p

Deleted: s

The IMO anticipates that the outcomes of this work will feed into its wider five year review of the determination of the MRCP.

SCOPE OF WORK

The IMO is seeking the services of a Consultant with a strong knowledge of the Western Australian regulatory environment to assist the IMO in determining an appropriate deep connection cost estimate calculation. The final calculation will be conducted by Western Power.

The Consultant will be expected to deliver a specific calculation methodology for Western Power to follow when estimating the deep connection costs associated with the connection a [Power Station](#) to the [SWIS](#) in accordance with the Market Procedure.

Deleted: p

Deleted: s

Deleted: South West interconnected system

The calculation methodology will be required to take into account:

- Western Power's Capital Contributions Policy;
- [Possible outcomes and implications of the application of the New Facilities Investment Test \(NFIT\)](#);
- Related legislation such as the Access Code, the Metering Code, the Technical Rules etc and any other relevant regulatory considerations;
- The appropriateness of applying an escalation for locations outside the metropolitan area;
- Appropriate tariff charges to include, i.e. the most up to date tariffs are in the 2010 Western Power Price List⁵ should Western Power scale these up when applying the Capital Contributions policy, if so how;
- [The nature of the current capacity based market and the associated need for unconstrained network access](#);
- Application of GST; and
- Any other considerations the Consultant deems should be taken into account.

Deleted: O

Formatted: Bullets and Numbering

Specifically, the Consultant will be required to:

⁵ Available on the Western power website:
<http://www.westernpower.com.au/mainContent/workingWithPower/NetworkAccessServices/NetworkAccessPrices/NetworkAccessPrices.jsp>

- analyse any assumptions made by Western Power and the IMO in the estimation of the deep connection costs used in the MRCP calculation for the 2010 Reserve Capacity Cycle and recommend adopting or replacing those assumptions. Where an assumption is recommended to be replaced the Consultant will be required to propose a different assumption. The Consultant will be expected to comment on both stated and implied assumptions; and
- if appropriate, propose an alternative methodology for estimating the deep connection costs used in the MRCP, explicitly stating all assumptions made in the methodology.

Formatted: Indent: Left: 17.85 pt, Tabs: 35.85 pt, List tab + Not at 72 pt

Formatted: Indent: Left: 17.85 pt

Formatted: Indent: Left: 17.85 pt, Tabs: 35.85 pt, List tab + Not at 72 pt

The main deliverable for this project will be a report comprising the following:

1. A document which plainly states each parameter that should be used by Western Power in calculating an estimate of deep connection costs under both the Western Power methodology (including details of any amended assumptions and assumptions associated with the Western Australian regulatory regime) and the alternative methodology, the calculation methodology for each parameter, and the assumptions inherent in each calculation. This document will need to be worded such that it can either be incorporated directly into the Market Procedure or be used as a subsidiary document to the Market Procedure. This document will in effect provide a definition of deep connection costs;
2. Details of the costs associated with the deep connection costs that should be included in the MRCP, e.g. the capital contributions estimated by Western Power in the 2010 MRCP review or another cost variable to take into account potential changes to tariffs etc.; and
3. Details of the relevant recommendations and analysis undertaken in determining the information provided in the document referred to above.

Agenda Item 3: Appendix 2

Scope of Works: Calculation Methodology to be applied in determining the Weighted Average Cost of Capital

BACKGROUND

The Wholesale Electricity Market Rules (Market Rules)¹ and the Market Procedure for: Determination of the Maximum Reserve Capacity Price (MRCP)² (the Market Procedure) requires the IMO to calculate a MRCP each year. The MRCP sets the maximum offer that can be made in a Reserve Capacity Auction and is used as the basis for determining an administered Reserve Capacity Price if no auction is required and capacity redunds.

Deleted: the determination of

Deleted: .

The purpose of the MRCP is to incentivise an investor to propose to build a 160 MW Open Cycle Gas Turbine (OCGT) and enter the proposed power station into a Reserve Capacity Auction. As such the price needs to accurately reflect all of the costs (including the rate of return) which are likely to be incurred by the proponent in constructing the Power Station.

Deleted: p

Deleted: s

In particular, the Market Procedure outlines that the principles to be applied and the steps to be taken by the IMO in order to develop and propose the MRCP. Section 1.13 details the calculation and application of the Weighted Average Cost of Capital (WACC) in determining the total cost of developing the Power Station.

Deleted: section 1 of t

Deleted: p

Deleted: s

In accordance with clause 4.16.9 of the Market Rules the IMO is currently reviewing the Market Procedure³. As part of this review it has been identified that certain elements of the methodology behind the calculation and application of the WACC may need to be reviewed.

Deleted: the assumptions and

To guide this review the IMO wishes to engage an Economic Consultant to provide a report to the IMO on the appropriate parameters, assumptions, calculation and application of the WACC in determining the MRCP. This report will need to be in the context of the Western Australian Wholesale Electricity Market.

The IMO anticipates that the outcomes of this work will feed into its review of the determination of the MRCP.

SCOPE OF WORK

The IMO is seeking the services of an Economic Consultant to assist the IMO in reviewing any aspects of the current WACC calculation and assumptions in the Market Procedure

¹ Available on the IMO website: <http://www.imowa.com.au/market-rules>

² Available on the IMO website: http://www.imowa.com.au/f711.482994/482994_Market_Procedure_for_Maximum_Reserve_Capacity_Price.pdf

³ Note that the first review of the calculation and application of the WACC in the determination of the MRCP was undertaken by the Allan Consulting Group (ACG) in 2007. This review has been provided as Appendix 1 of this Request for Quotation.

where a recognised change in the regulatory space has occurred. The review will need to include the following considerations:

- Appropriate WACC equation: The review will need to review any changes in the regulatory environment which have been occurred since the 2007 review into the WACC performed by Allen Consulting Group and, if appropriate, recommend an appropriately revised methodology to calculate the WACC.

- Deleted: ¶
- Deleted: R
- Deleted: occurred
- Deleted: recommend an appropriate WACC equation
- Deleted: if required as a result of an identified change to the regulatory space or for the inclusion of debt and equity margins
- Deleted: <#>. ¶
- Deleted: OCGT

- Application of the WACC: The Consultant is to consider how the WACC should be applied to the cost of building the Power Station. Currently the WACC is applied to the entire cost of the project two years before the project is due to be completed.

As a deliverable the Consultant should provide to the IMO an appropriate application equation to be included in the Market Procedure.

- Purpose of MRCP: The Consultant is to provide a recommendation whether the MRCP should incentivise a Power Station to be included in the auction or whether the MRCP should just cover expected costs of building the Power Station.

- Value of parameters to be included in the WACC and Capital Asset Pricing Model: The review will need to consider;

- Deleted: ¶
- Deleted: P
- Deleted: include
- Formatted: Font: Bold, Italic, Underline

- The parameters for which values should be specified in the Market Procedure, the values that should be adopted for these parameters and the basis for these values.

Specifically when assessing the calculation of the asset beta, the review will need to consider whether the comparison to similar companies in the NEM and the use of any derived proxy values are rational and reasonable in the WEM context

- Formatted: Indent: Left: 2.54 cm, No bullets or numbering
- Deleted: s
- Formatted: Font: (Default) Arial
- Formatted: Font: Not Bold, Not Italic, No underline
- Deleted: ¶
- Formatted: Space After: 0 pt

For these parameters, the review will need to consider:

- how frequently the specified values for these parameters should be reviewed (e.g. every five years); and
- whether there are defined circumstances that should trigger a review of the specified values despite a scheduled review not yet being due.

- The parameters for which values should not be specified in the Market Procedure, but where the Market Procedure should instead specify processes for establishing values for these parameters.

For these parameters, the review will need to consider the potential conflicting objectives of maintaining consistency across time with accuracy.

For example, if the Market Procedure was not to specify a value for the equity beta, but instead prescribe a process by which the value of the equity beta was to be annually determined, the review will need to consider:

- the basis on which a set of comparator companies used to derive such an estimate was established;
- the number of comparator companies to include in the set of comparator companies;
- whether the set of comparator companies used to derive such an estimate should remain fixed; and
- whether there would be circumstances under which the set of comparator companies may be changed.

In conducting this assessment the Consultant will be required to:

- analyse other parameters included by the IMO in the calculation of the MRCP, especially in regards to the calculation of the margin M parameter. The Consultant will be expected to make a recommendation on whether debt issuance costs are more appropriately included as part of the WACC or as part of Margin M;
- provide a recommendation detailing if any of the parameters should include a risk margin to incorporate the risk that no Reserve Capacity Auction will be held; and the rationale for inclusion or exclusion of this risk;
- provide a rationale for any proposed changes to the methodology, parameters, assumptions, calculation and the application of the WACC in determining the MRCP.

The key deliverable for this part of the project will be a report comprising the following:

1. A section which plainly states the recommendations regarding:
 - each parameter;
 - the calculation methodology for each parameter;
 - when each parameter should be updated; and
 - the assumptions inherent in each calculation.

This section of the report will need to be worded such that it can either be incorporated directly into the Market Procedure or be used as a subsidiary document to the Market Procedure;

2. A section detailing the analysis undertaken in determining the recommendations (as presented above); and
 3. A section detailing the results of the calculation.
- Any other considerations the Consultant deems should be taken into account.

Formatted: Space After: 0 pt, Bulleted + Level: 2 + Aligned at: 1.9 cm + Tab after: 2.54 cm + Indent at: 2.54 cm

Deleted: disclosure

Deleted: .

Formatted: Indent: Left: 0 cm, Space After: 0 pt

Deleted: <#> Which parameters should be included as major and minor components and also if two categories (major and minor) are sufficient to described the possible scenarios which may impact the WACC;¶

¶ <#> For each of the components:¶

¶ <#>Detailed analysis of the minor components to be included in the WACC. In conducting this assessment the Consultant will be required to analyse other parameters included by the IMO in the calculation of the MRCP, especially in regards to the calculation of the margin M parameter. The Consultant will be expected to make a recommendation on whether the information is more appropriate to be calculated as part of the WACC or as part of Margin M.¶

¶ <#>Which major components to include in the calculation of WACC;¶

¶ <#>The methodology to calculate each component, where this methodology must be repeatable and have alternative positions if some data is potentially unavailable;¶

¶ <#>The assumptions underlying the calculation of each parameter; ¶

¶ <#>When each component should be updated; this must include whether it is appropriate to update parameters between the draft and final report (e.g. for the minor components) and also if the parameter should be updated on an annual basis or on a less regular basis. ¶ [1]

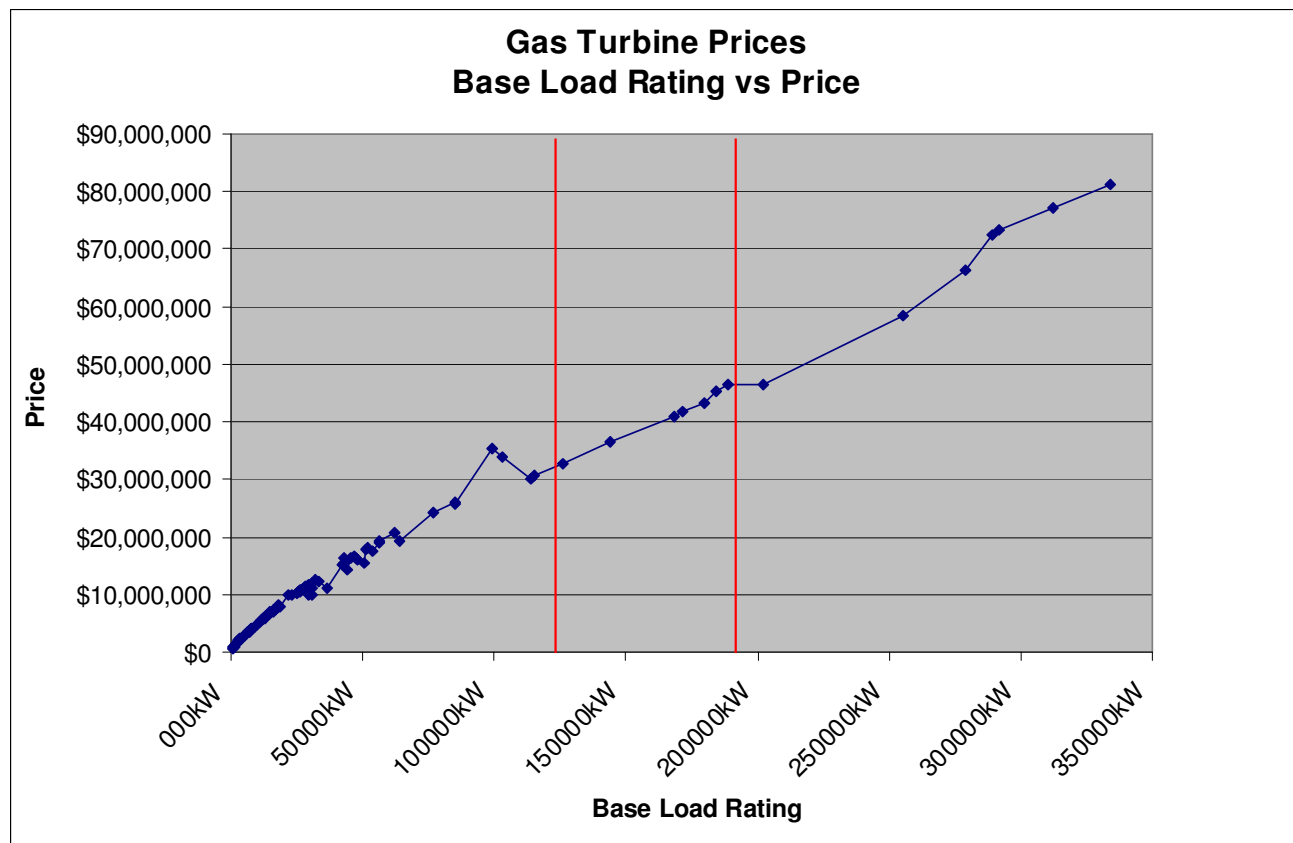
Formatted: Indent: Left: 0 cm

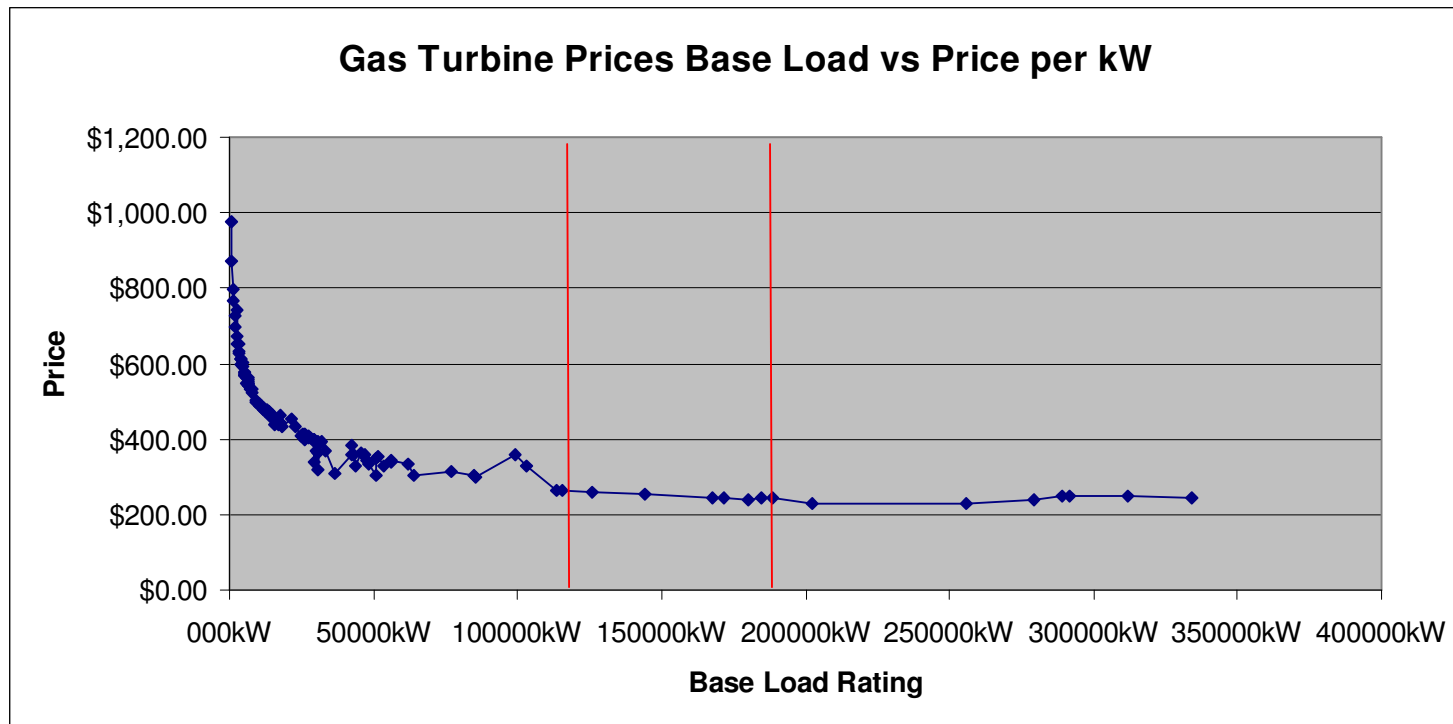
Deleted: ,

Deleted: ¶

Agenda Item 3: Appendix 3

Gas Turbine Prices





Agenda Item 4: Review of MRCP Components

At the first Maximum Reserve Capacity Price (MRCP) Working Group (MRCPPWG) meeting on 31 May 2010 the Working Group members agreed that the current construct of the MRCP remains fit for purpose.

The IMO proposed that members begin reviewing the components of the MRCP at the 22 June 2010 meeting, as outlined in Sections 1.5 to 1.13 of the Market Procedure for Determination of the Maximum Reserve Capacity Price. It was agreed that the remainder of outstanding issues would be covered during subsequent meetings.

The components are listed below, along with information to guide the Working Group's decision-making process.

Component	Options	Market Procedure Reference
Power station – type	<ul style="list-style-type: none"> • OCGT, low NOx burners • Other 	Sections 1.5 to 1.7
Power station – capacity	<ul style="list-style-type: none"> • 160 MW • 40 MW • Another value linked to forecast demand growth 	Section 1.5
Power station – fuel type	<ul style="list-style-type: none"> • Distillate only • Dual fuel 	Section 1.5
Power station – capacity factor	<ul style="list-style-type: none"> • 2% • Other value 	Section 1.5
Liquid fuel storage and handling facilities	<ul style="list-style-type: none"> • Current specifications • Alternative specifications 	Section 1.9
Transmission connection – source of valuation	<ul style="list-style-type: none"> • Western Power • Alternative provider 	Section 1.8
Transmission connection – location	<ul style="list-style-type: none"> • Linked to land valuation locations • Alternative location(s) • Optimisation of land & connection costs 	Section 1.8
Transmission connection – other elements	<ul style="list-style-type: none"> • Capital Contribution Policy • Tariffs 	Section 1.8
Fixed O&M	<ul style="list-style-type: none"> • Current methodology • Alternative methodology 	Section 1.10
Land – source of valuation	<ul style="list-style-type: none"> • Landgate • Alternative valuer 	Section 1.11
Land – location	<ul style="list-style-type: none"> • Current list • Alternative location(s) 	Section 1.11
Land – size	<ul style="list-style-type: none"> • 3 ha (no buffer zone) • 30 ha (with buffer zone) 	Section 1.11

	<ul style="list-style-type: none"> • Alternative size 	
Margin M (legal, insurance, financing, environmental approval costs)	<ul style="list-style-type: none"> • Current methodology • Removal of debt/equity issuance costs (part of WACC) • Alternative methodology 	Section 1.12
Contingency margin	<ul style="list-style-type: none"> • Factor of 0.15 • Alternative value 	Section 1.12
Weighted Average Cost of Capital (WACC) - source	<ul style="list-style-type: none"> • Determined by IMO • Determined by ERA • Alternative source 	Section 1.13.4
WACC - basis	<ul style="list-style-type: none"> • Auction and Long-Term Special Price Arrangement • Alternative basis 	Section 1.13
WACC – period from auction to payment stream	<ul style="list-style-type: none"> • 2 years • Split over multiple years • Alternative 	Section 1.13.2
WACC – determination of Minor and Major components, review schedule	<ul style="list-style-type: none"> • Current methodology • Alternative methodology 	Section 1.13
WACC – basic calculation method	<ul style="list-style-type: none"> • Current methodology (CAPM, pre-tax, Officer WACC method) • Alternative 	Section 1.13.7
WACC – equation	<ul style="list-style-type: none"> • Current equation • Alternative equation 	Section 1.13.8