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22 July 2013

Economic Regulation Authority
Level 4, 469 Wellington Street
Perth WA 6000

By email: publicsubmissions@era.com.au

Dear Sir

SUBMISSION ON THE MRCP AND ERL

Merredin Energy is a participant in the South West Interconnected System and owner of the 82MW peaking generation plant recently constructed in Merredin, WA. We welcome the opportunity to provide the attached submission to the ERA in response to its consultation paper dated 24 June 2013.

Yours sincerely

Julian Widdup
Director

SUBMISSION ON THE ERA'S CONSULTATION PAPER

ERA Review

The current ERA review follows a number of recent reviews including the MRCP review conducted in 2011 and the IMO's recent change in demand forecast methodology. We note the ERA has also proposed the WA Public Utility Office (PUO) undertakes a further holistic review of the Wholesale Electricity Market (WEM).

These numerous reviews, one after another, present an administrative burden and are unhelpful as they add to the reserve capacity price uncertainty. In our view, it would be far better to have a more co-ordinated approach on the reviews. We would recommend a more structured approach to future reviews.

The current ERA review is very broad, encompassing energy price limits, the reserve capacity mechanism and has invited comments on the individual components of the MRCP. Our comments on the individual components of the MRCP have been clearly articulated in our previous submissions to the IMO on the MRCP (which are attached to this submission). We encourage the ERA to review those attachments in detail.

We also wish to highlight the following issues for consideration by the ERA in recommending improvements to the WEM.

IMO Public Consultation Process

From Merredin Energy's perspective the IMO's working groups and public consultation processes have not been as effective as they could be. Our previous experience with making submissions as part of the IMO's public consultation process is that our comments often get little traction. We have been disappointed when the IMO's final report makes reference to previous decisions of a working group, to argue against our suggestions, particularly when the working group had not convened to consider the specific comments contained in the public submissions. This was a major shortcoming of the previous MRCP review process completed in 2011. Such a process significantly undermines the usefulness of the public consultation process and should be improved.

We are further concerned that the IMO's proposal to adopt the Lantau formula for setting reserve capacity prices may follow a similar process.

We note the ERA's approval of the MRCP does not include a review of the individual building block components that make up the MRCP. Furthermore, the ERA does not specifically consider if the IMO has adequately addressed all concerns raised in submissions. For example, the new balancing process places an onerous administrative burden on generators. In our submission on the 2015-16 MRCP, Merredin Energy disclosed its fixed overhead costs associated with lodging its balancing bids and we argued those costs should be included in the fixed O&M component of the MRCP. The IMO dismissed that comment, which suggested it did not understand the actual costs facing generators and highlighted that it was completely out of touch with administrative workload and actual costs of complying with its own balancing regime. Expanding ERA's review to ensure all submission points are addressed adequately by the IMO would be an improvement.

We also recommend the introduction of an appeal mechanism, whereby if a market participant considers the IMO to have misstated an MRCP parameter or acted outside market rules, it can appeal to the ERA (or another entity). Currently there are no appeal mechanisms.

Reserve Capacity Mechanism

Merredin Energy is a supporter of the capacity payment regime in the Wholesale Electricity Market. Peaking generators rely on the reserve capacity revenues in order to obtain debt financing and to achieve a

return to equity. The market is too small and too concentrated (with significant market power controlled by government-owned companies Verve and Synergy) to move away from a reserve capacity mechanism. We recommend reserve capacity arrangements be retained in a form similar to the current arrangements.

We further recommend that the primary policy objective of the reserve capacity arrangements be to provide fair compensation for new peaking generators.

Reserve Capacity Auction Process

We recommend the capacity auction process be disbanded and the market should move to an administered reserve capacity price only.

We note that to date there has been no auction in the WEM and consider an auction most unlikely under the current arrangements. To be able to participate in an auction, a project must have secured certification which, in turn, requires it to have secured a network access offer, arranged finance, secured a site, secured firm plant supply offers and advanced environmental approvals. It is unlikely a proponent would take a significant project to this stage of development unless it intended to secure capacity credits through the bilateral trade arrangement.

However, in the event that an auction were to take place, we see that there is a significant risk that it could be gamed by a proponent to push prices to the maximum permitted level or that the price could collapse due to a project bidding at zero, or close to zero.

Bilateral trading of reserve capacity

The bilateral trading of reserve capacity is very difficult in the current market. Market demand is dominated by Synergy. Synergy's relationship with Verve makes it impossible for independent generators such as Merredin Energy to negotiate appropriately priced capacity offtake agreements. We recommend the ERA and IMO recognise the problems associated with that market power and recognise that significant volumes of capacity prices will continue to be settled via the IMO.

Merredin Energy remains concerned that the significant reductions MRCP revisions have been a response to a preconceived view by the IMO that the current reserve capacity price was too high. For example, we note the IMO presentation *Overview on the Market Evolution Program (MEP)* by Messrs Birnie, Black and Parrotte dated 20 July 2011 stated:

“the IMO Board commissioned a review of the Capacity Mechanism; identifying an alarming increase in the credits being procured from the IMO (around 50% of the total now) indicating that the price might be too high”

The relationship between (i) the volume of credits procured through the IMO and (ii) the reasonableness of the capacity price is unclear to us. We would have thought those factors were independent. More importantly, the market and policy makers needs to accept that significant volumes of capacity credits will continue to be procured via the IMO particularly as the state owned market participants continue to wield significant market power.

Level of MRCP

Merredin Energy considers the MRCP for 2015-16 to be materially lower than the actual costs of building a new open cycle gas turbine power station. In particular, network connection costs, WACC parameters and the fixed O&M allowance are below market standard. Our rationale for this detailed in the attachments.

Merredin Energy is concerned that the recent downward revisions to the MRCP may be a policy response to a preconceived view that the reserve capacity price is too high. The reserve capacity prices should not be a short term lever to limit new capacity or to arbitrarily reduce electricity prices in a way that significantly disadvantages generators. It should be a payment mechanism to reward appropriately generators for having developed capacity.

Excess Capacity

We recognise that sustained over supply of generation capacity results in economic inefficiencies. The Merredin Energy plant was developed in 2011 response to the high demand forecasts contained in previous Statements of Opportunities and the previously MRCP levels (which had made the project economically viable). The excess supply, which is currently depressing the RCP, is having an adverse effect on Merredin Energy and other generators.

The issue of excess capacity is compounded with unreliable power stations such as Kwinana C receiving full capacity credits.

The volume of excess capacity is further compounded by demand side management (DSM). DSM should not be seen as a substitute for peaking capacity. The development of the Merredin power station has added permanent capacity. DSM is not permanent. Participants can opt in and out of the scheme. Furthermore, DSM is not subject to the same testing or dispatch regime or refund penalties and should not receive the Reserve Capacity Price. Generators' reserve capacity revenues are being inappropriately discounted due to the surplus capacity associated with the large degree of DSM registered in the market.

We recommend the DSM capacity price be set separately from the reserve capacity price. To the extent there is excess capacity, DSM becomes less valuable. If there is a capacity shortage, DSM becomes more valuable. Also because DSM can be switched on and off relatively quickly, its economic cost should be linked to the amount of excess capacity. In our view, the DSM capacity price should be very responsive to capacity shortfalls. Permanent reserve capacity prices should be very stable over time.

MRCP 15% discount

Merredin Energy argues the 15% discount to the MRCP should be removed. We believe a review of that parameter would have been more important than several of the other parameters that have been reviewed in the various IMO reviews but has continually (and conveniently) remained out of scope.

We remain concerned around the delayed timeframe for removing of the 15% MRCP discount factor and suggest the ERA recommends the IMO fast tracks the removal of that factor via a rule change procedure.

Reserve Capacity Price Volatility

Once the RCP reaches a higher and more sustainable level, we would suggest the administered RCP price be set as the average of the past three year determinations, so that there is a more gradual move in revenues rather than single one-off shocks. However, given the RCP is so low, we would caution against introducing such a mechanism at this point.

The current arrangements allow the IMO to average transmission costs only while adopting spot rates for WACC components and construction costs. We would argue that either all parameters are should be set on an historic basis (equivalent to adopting an average RCP) or that all parameters be set at a point in time.

Reserve Capacity Price Visibility

The IMO should provide greater visibility to forward RCP estimates (e.g. forward 5-10 year estimates). If its Statement of Opportunities can forecast demand that far in the future, it should be able to estimate forward RCP out that far as well.

MRCP Discretionary Components

There is currently too much subjectivity in the MRCP components. Examples are:

- The period of time used to select the risk free rate is determined by the IMO and somewhat arbitrary. We would suggest selecting a specific period, such as average for the month of September every year, rather than allowing the IMO to select any recent 20 day period. Depending on the state of the capital markets, this could have a meaningful effect on the RCP.
- A number of the WACC parameters are reviewed five yearly, unless the IMO considers there to be a market event that causes a review. It is poor public policy for the IMO to be able to make judgement calls on which parameters to review and when. Best practice would see the IMO publish guidelines on that point or review all parameters annually. This would reduce the subjectivity present in the application of the current market procedures.
- We remain perplexed as to why the future inflation parameter is not inferred from the yield differential between government ten year bonds and inflation linked bonds. This is an accurate measure and should further reduce the subjectivity in estimate the inflation parameter.

O&M Parameters

The fixed O&M component of the reserve capacity price should include:

- An appropriate allowance for forced outages
- An appropriate allowance for the diesel costs associated with meeting the IMO compliance tests and the Department of Environment's emissions tests

MRCP Parameters

The following parameters are inappropriate and result in an MRCP which is too low:

- Six month WACC period. Any S-curve for building a power station will have average costs incurred well prior to six months prior to completion.
- Debt issuance costs. In the current market debt is to be refinanced every 3 to 5 years. The upfront refinancing costs, as well as legal, advisory and other costs far exceed the estimate adopted by the IMO
- Transmission connection costs (with the current historical market averages bearing no resemblance to current connection costs)
- Water Corp connection costs
- Insurance
- The costs of diesel used for the initial commissioning and testing of the plant.

Our rationale in relation to these points has been documented in Merredin Energy's previous submissions to the IMO on the MRCP methodology review and the MRCP dated 3 October 2011, 17 January 2012 and 19 December 2012.



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3 October 2011

Independent Market Operator
Attn: Manager Market Development & System Capacity
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Cloisters Square, Perth, WA 6850

By email: market.development@imowa.com.au

Dear Sirs

**Wholesale Electricity Market – Submission to Procedure Change Proposal PC_2011_06
Five Yearly Review of the Methodology and Process for Determining the Maximum Reserve Capacity
Price**

In accordance with clause 2.10.7 of the Wholesale Electricity Market Amending Rules, Merredin Energy hereby submits the attached response to Procedure Change Proposal PC_2011_06 “Five Yearly Review of the Methodology and Process for Determining the Maximum Reserve Capacity Price” dated 6 September 2011.

We would welcome the opportunity to discuss the issues raised in our submission.

Yours sincerely

Shane Jones
Director

Julian Widdup
Director

WHOLESALE ELECTRICITY MARKET – SUBMISSION TO PROCEDURE CHANGE PROPOSAL PC_2011_06

Five Yearly Review of the Methodology and Process for Determining the Maximum Reserve Capacity Price (MRCP)

Respondent details:

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Date submitted:	3 October 2011

1. Executive Summary

Merredin Energy is a new participant in the SWIS and owner of the 82MW peaking generation plant being constructed near the town of Merredin WA. We welcome the opportunity to submit this response in relation to the IMO's *Five Yearly Review of the Methodology and Process for Determining the Maximum Reserve Capacity Price*.

Merredin Energy's power station is similar in concept to the notional power station used to develop the MRCP. It comprises two heavy industrial open cycle gas turbine generators each of which is fitted with air inlet cooling. The plant has an on-site water treatment plant, diesel fuel tanks and fuel handling system, high voltage switchyard and connection to the Western Power grid.

The plant is smaller than the notional 160 MW plant used to develop the MRCP and this may lead to some increases in unit costs. However, Merredin Energy secured very good prices for its gas turbines prior to the earthquake induced tsunamis that devastated Japan's east coast that subsequently placed upward pressure on the prices of popular gas turbines around the world. In addition, the transmission connection is being made at 132 kV, rather than 330 kV, with very limited deep connection costs, the result of the project having applied for network access since 2005, well before the onset of significant rises in transmission deep connection costs in more recent years.

Despite such legacy advantages, the overall cost of developing the Merredin power station is very close to the capital costs used within the January 2011 MRCP Review for the 2013/14 Reserve Capacity Year. We consider that the substantial reductions now proposed are unrealistic and do not reflect the actual costs which developers currently face. This submission considers the various MRCP components and identifies where, in our opinion, the proposed costs require review.

2. Is the MRCP too high?

Merredin Energy is an avid supporter of the capacity payment regime in the Wholesale Electricity Market. In particular we note that the policy objectives of the MRCP are:

- to provide fair compensation for new peaking generators; and
- not intended to be an investment signal and is not affected by demand/supply balance.

We recommend that these broad policy settings remain in place.

However, Merredin Energy would like to express concern that the proposed MRCP revisions may be a response to a preconceived view that the current reserve capacity price was too high.

For example, we note the IMO presentation *Overview on the Market Evolution Program (MEP)* by Messrs Birnie, Black and Parrotte dated 20 July 2011 stated:

“the IMO Board commissioned a review of the Capacity Mechanism; identifying an alarming increase in the credits being procured from the IMO (around 50% of the total now) indicating that the price might be too high”

The relationship between (i) the volume of credits procured through the IMO and (ii) the reasonableness of the capacity price is unclear to us. We would have thought those factors were independent.

We note that the IMO does not have an objective to limit capacity credits procured via the IMO. We would recommend against such an objective being introduced and would hope the IMO remains indifferent as to the volume of capacity credits procured through it.

We also note that the IMO does not have a lever to limit the short term over supply of generation. We assume that market participants and policy makers are not particularly concerned with excess capacity, given that any excess of capacity leads to a corresponding reduction in the Reserve Capacity Price. Excess capacity actually increases the overall system reliability at no increased cost to retailers or end customers.

3. Auction Mechanism

We note that to date there has been no auction in the WEM and it is our opinion that an auction is most unlikely under the current arrangements.

To be able to participate in an auction, a project must have secured certification which, in turn, requires it to have secured a network access offer, arranged finance, secured a site, secured firm plant supply offers and advanced environmental approvals. It is unlikely a proponent would take a significant project to this stage of development unless it intended to secure capacity credits through the bilateral trade arrangement.

However, in the event that an auction were to take place, we see that there is a significant risk that it could be gamed by a proponent to push prices to the maximum permitted level or that the price could collapse due to generators bidding at zero, or close to zero.

Merredin Energy recommends that the IMO significantly alters the auction rules to address these risks by:

- removing the auction mechanism completely; or
- Introducing an auction floor at the pre-determined (non-auction) capacity price

4. Capacity Price Stability

The IMO may wish to consider the benefits of making a policy decision to stabilise MRCP.

The flaw with the current policy position is that there is significant volatility in the reserve capacity price (evident by the 45% increase in the MRCP in 2012 and the proposed 24% fall in 2013-14) but no allowance is made in the equity market risk premium or WACC calculations for the high level of regulatory price risk.

A volatile capacity price creates serious funding issues for generators. Merredin Energy recently raised equity and bank debt to fund the construction of its 82MW plant. The cost of funding was higher than assumed in the proposed WACC calculations. This was due, in part, to the high bank margins arising directly from the perceived risks with the reserve capacity determination process (i.e. regulatory risk) and in part due to the lack of competition from banks, with several banks refusing to loan funds to development projects. Stabilising capacity prices may assist in improving bank's willingness to loan to generators.

The proposed 24% decline in the MRCP will make it even more difficult to raise finance for future projects. In response to such a dramatic fall, we expect lenders to take the following actions:

- Limiting debt tenors to coincide with the next IMO five yearly review; and/or
- Require repayment triggers in the loan agreements so that loans are repaid, resized or margins increased in the event of future downward capacity price determinations.

These debt terms, if introduced, would significantly increase the refinancing risk for projects and should translate into a higher WACC and higher capacity prices. Higher capacity prices would assist generation facilities to remain solvent in the event of a negative short term price determination. However, higher capacity prices are ultimately borne by end consumers, which runs contrary to wholesale market objective (d).

Smoothing capacity credits changes over time could help to achieve the market objective of lowering long term supply costs via a lower WACC. Sharing aggregate capacity costs across end consumers over longer periods, should not necessarily result in an overall increase in aggregate capacity payments and therefore should not lead to inefficient economic outcomes.

5. Financial Effect on Merredin Energy

The proposed 24% reduction in the capacity price would put significant financial stress on Merredin Energy.

Merredin Energy's project costs were funded by raising equity from institutional investors (primarily Australian superannuation funds) and raising ten-year bank debt. The commitment by long term superannuation investors to build essential infrastructure in WA should be seen as a very positive development. Merredin Energy has aspirations to develop a further two new open cycle generator units to

increase its total capacity to 160MWs and had already commenced discussions with our investors in that regard.

A 24% reduction in the capacity prices would result in a significant reduction in investor returns and make it virtually impossible for Merredin Energy to raise additional equity in future. We expect this situation would also apply to other generators.

The current amount of bank debt raised by Merredin Energy was based on debt service cover ratio (DSCR)¹ projections of 1.8x. This is a relatively modest gearing level, with operational earnings generally expected to exceed debt payments by a factor of 1.8 times. A 24% reduction in capacity prices would reduce Merredin Energy's average DSCR to 1.39x, which is only marginally above the lock-up threshold of 1.30x and significantly increases the risk of the company breaching its debt covenants. Such a revenue shock would also significantly reduce the enterprise value (EV) of the business, pushing the Debt to EV ratio to uncomfortably high levels. This would making future refinancing almost impossible and would severely restrict our ability to undertake future capital/maintenance expenditure.

6. Application of 85% Discount

There does not appear to be any published information explaining why the MRCP is discounted in the event that the auction is cancelled. The recent review has been silent on whether the 85% discount factor is necessary or appropriate.

We would question whether it is still relevant and would welcome some clear justification for its retention.

7. Technological Improvements

We note SKM advised the IMO on the impact of inlet cooling on the MRCP. Merredin Energy is also aware of recent work conducted by SKM where it estimated future capacity prices by assuming an annual 1% efficiency gain from technological improvements.

Given water cooling is not a particularly new technology, it is surprising that this improvement should give rise to an immediate 11% fall in capacity prices. This is well above an average long term technological improvement factor of 1% sourced from SKM.

The large change in MRCP from the water cooling improvement suggests that the input parameters are difficult to estimate accurately and that either (i) the 2013 capital costs were significantly overestimated or (ii) the revised costs are significantly underestimated. This highlights a potential flaw with the current procedures. Perhaps small annual adjustments for technological improvements could be applied to achieve a lower real capital cost over time rather than making significant one-off adjustments.

The total project costs for Merredin Energy (including EPC, connection costs, development fees, etc) amount to \$96.7 million. Of that amount \$67.5 million (equivalent to \$823,658/MW) related to the power

¹ Debt Service Cover Ratio is calculated as the ratio of (i) cashflows earnings after all operating and capital expenses to (ii) sum of interest and principal payment obligations during a period. The DSCR ratios are calculated using the base case financial model forecasts excluding STEM energy sales.

station capital costs for the open cycle gas turbine plant with water cooling. These costs are similar to the total capital cost used to develop the 2013/14 MRCP (see IMO January 2011 report and Table 1 below) even though Merredin Energy was able to secure a low-priced connection point to the SWIS.

The construction costs are significantly higher than the parameters used to calculate the revised capacity price. We recognise that Merredin Energy’s 82MW OCGT facility is smaller than the notional 160MW OCGT and therefore it may not benefit from the same economies/efficiencies of a larger plant. However, we remain concerned that the estimated plant costs derived by SKM do not align with actual costs.

Table 1: Merredin Energy Costs relative to the final MRCP for 2013/14

	Merredin Energy	Final Report MRCP for 2013/14 ¹	Difference
	\$/MW	\$/MW	
Power Station Capital Costs PC[2011]	823,658	790,634	4.2%
Other ²	355,610	473,563	-24.9%
Sub-total	1,179,268	1,264,197	-6.7%
Gross-up factor ³	1.1805	1.1805	
CAPCOST[2011]	1,392,105	1,492,363	-6.7%

1. Source: Independent Market Operator Final Report: Maximum Reserve Capacity Price Review for the 2013/14 Reserve Capacity Year (dated January 2011)

2. Includes margin, transmission, fuel and land costs

3. Calculated as $(1 + WACC)^2$, using the WACC of 8.65%

8. WACC period

The IMO is proposing to reduce the WACC period from 24 months to 6 months.

This change is inappropriate. An equity sponsor has a financial exposure from the time it commits to the project, generally two years prior to the completion date. An equity risk premium (i.e. WACC less the cash rate) should apply from the equity commitment date.

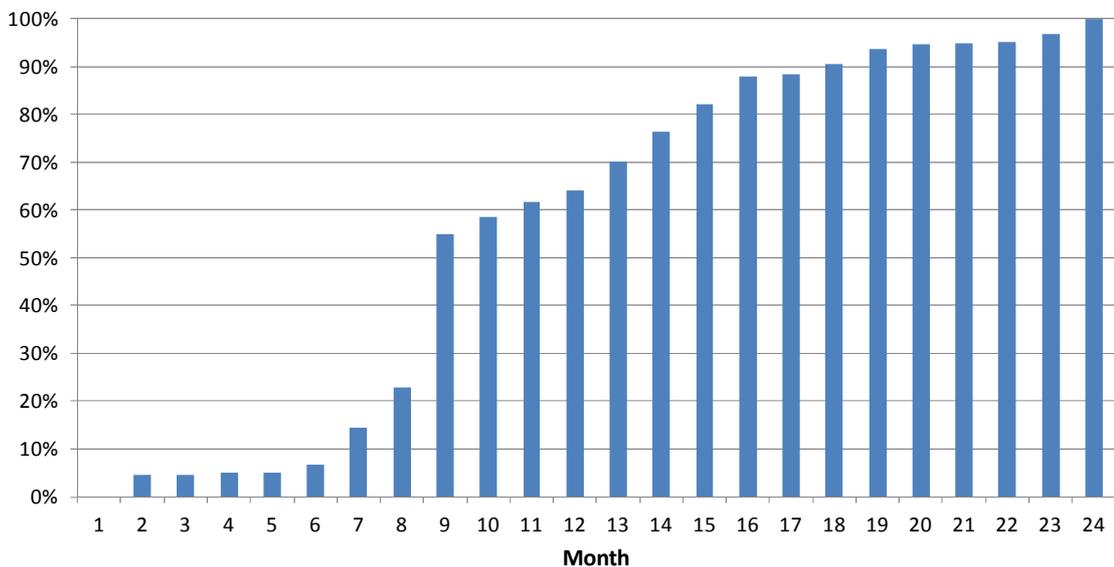
While finance theory might suggest the full WACC should be earned over the final six months reflecting the full cost of funding the project, we consider a six month period to be very short. In deriving a six month period, PwC assumed a 12 month construction spend period, with construction completed the same day that capacity revenues commence. Prudent planning and construction timetables include buffers for testing periods and appropriate delay contingencies. Our view is that the six month period should be increased to nine months, at a minimum.

Accounting for a total 24 month commitment period, including a nine month construction funding mid-point, the gross-up factor would be:

$$(1 + WACC)^{9/12} \times (1 + WACC - \text{risk free})^{15/12}$$

Merredin Energy’s view is that even a nine month mid-point spend is overly aggressive. The S-curve for the total project costs involved in commissioning our 82MW open cycle peaking generator is set out in Graph 1 below.

Graph 1: Merredin Energy – Open Cycle Gas Turbine S-curve



Significant costs under the Interconnection Works contract with Western Power were incurred in month 8 and in month 13. By the end of month 8, almost one-quarter of total project costs had been incurred. Around 30% of total project costs were incurred in month 9 due to significant instalment payments to General Electric for turbine units and to the EPC contractor for the balance of plant works.

The average S-curve value over the full 24 month period is 57.2%. This would suggest a gross-up factor of 14 months at the full WACC rate, and ten months at the reduced risk-premium rate:

$$(1 + \text{WACC})^{14/12} \times (1 + \text{WACC} - \text{risk free})^{10/12}$$

9. Insurance and fuel

Merredin Energy agrees with the proposed changes in respect of insurance and fuel, although the cost of insurance is lower than expected.

In addition to property insurance, Merredin Energy has (i) public and products liability and (ii) business interruption insurance. Once construction is completed we anticipate extending the insurance cover to incorporate pollution liability. These forms of insurances are necessary regardless of the hours operated and should be included in the fixed annual O&M provision.

In particular, business interruption insurance is necessary for generators funded by debt, as capacity penalty refunds could easily cause an event of default under the bank financing agreements in the absence of such cover. The pollution liability insurance provides cover for claims and remediation costs arising from the release or seepage of a contaminant or pollutant into land surface water or groundwater. We consider the cost of such cover to be a fixed cost rather than a marginal operating cost. Such cover is prudent

even if the plant is not operating because there is a risk of contamination arising from the on site storage of fuel.

The practical reality is that the insurance costs are largely independent of the hours of operation and should not be treated as marginal costs. We have disclosed the insurance estimates in Table 2 below.

Table 2: Annual insurance costs

Insurance	Annual premium	Cost / MW
Property Insurance	\$115,000	\$1,400
Industrial Special Risks (incl Public and Products liability, business interruption, pollution liability)	\$385,000	\$4,700
Total	\$500,000	\$6,100

10. Debt issuance costs

Included in the development costs is a 0.125% allowance for up-front debt issuance costs. This estimate appears to be well below current market rates. Merredin Energy’s recent experience in raising debt through a facility with a ‘big four’ bank involved an upfront loan establishment fee of 1.6%.

Merredin Energy’s construction facility agreement also includes a line fee of 1.5% of the undrawn commitment. The current debt issuance costs do not include an allowance for the line fee.

Arguably, there may be some economies of scale with larger 160MW plants incurring smaller percentage costs. However, we expect the rates applying to Merredin Energy would not deviate significantly for a 160MW facility funded with 35% debt.

11. Transmission connection costs

Merredin Energy notes the options identified by SKM in determining connection costs. We disagree a backward looking approach such as Option 2 is sensible (refer to SKM’s report *IMO Deep Connection Cost Calculation -Methodology Review*).

We have not been convinced of the short comings with the current process and recommend no change in methodology at this point.

Should the IMO be concerned about connection efficiencies, consideration could be given to the importance of network reinforcement and whether the existing regime provides appropriate economic incentives to upgrade or build around network constraints. For example:

- Should capacity price adjustments be applied to plants that fund deep connection costs?

- Could generators be assigned a 'regulated asset base' for the deep network connection costs they fund, thereby removing deep connection costs from the capacity credit calculation?
- Should premia/discounts apply to plants constructed in certain areas that add to/detract from network stability?

12. Summary

Merredin Energy considers that the MRCP for 2013/14 is based on costs that are generally representative of the actual costs of building a new open cycle gas turbine power station. We consider that the proposed substantial MRCP reductions are unrealistic and do not reflect the actual costs which developers currently face. In addition, we consider that financiers will be alarmed by the volatility of price changes and this will, in turn, increase the cost of funding. We suggest that any reductions be substantially reduced or, as a minimum, be smoothed over a period of several years.

Merredin Energy is happy to provide more detailed figures to the IMO for its confidential review but cannot provide these into the public domain. We would be happy to discuss any of the matters raised here directly with the IMO.



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17 January 2012

Attn: Mr Greg Ruthven
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Independent Market Operator
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By email: imo@imowa.com.au

Dear Sir

SUBMISSION ON THE IMO'S DRAFT MRCP REPORT FOR 2014-15 CAPACITY YEAR

Merredin Energy is a new participant in the South West Interconnected System and owner of the 82MW peaking generation plant being constructed near the town of Merredin, WA. We welcome the opportunity to provide comments on the Independent Market Operator's Draft Report on the Maximum Reserve Capacity Price published on 13 December 2011. Our submission on the MRCP for 2014-15 is attached.

We would be happy to discuss the issues raised in our submission with the IMO in further detail.

Yours sincerely

Shane Jones
Director

Julian Widdup
Director

SUBMISSION ON THE IMO'S DRAFT MRCP REPORT FOR 2014-15 CAPACITY YEAR

1. MRCP Review and Consultation Process

Merredin Energy considered the MRCP for 2013-14 to be representative of the actual costs of building a new open cycle gas turbine power station. The substantial MRCP reduction for 2014-15 is unrealistic and results in an MRCP that does not reflect the actual costs currently faced by developers of new OCGT power stations.

Merredin Energy is concerned that the proposed MRCP revisions may be a knee-jerk response to a preconceived view that the previous reserve capacity price was too high. The MRCP is not a blunt tool for limiting new capacity and we note the IMO does not have a stated policy objective to limit excess capacity.

The primary functions of the MRCP are to determine the reserve capacity price in non auction years and to provide adequate remuneration to owners of reserve capacity generation plants. Its role in remunerating generators should not be seen as a secondary issue to the price cap for a reserve capacity auction. We consider that financiers will be alarmed by the volatility of price changes and this will, in turn, increase the cost of funding. This volatility must feed into the asset beta and the WACC.

To ensure the MRCP is set at an appropriate level, Merredin Energy recommends the IMO reviews the process and timeframes for determining the MRCP. In particular we note the following:

- The changes to the methodology following the recently completed five yearly review should have commenced in 2015-16 capacity year (rather than in 2014-15) to provide for a more orderly transition. There are several shortcomings with the application of the new MRCP market procedures – some of which were raised in our previous submission and others that were only identified as a result of the application of the new market procedures. We have addressed some but not all those concerns in this submission. Several of our identified shortcomings would be out of scope for the purpose of adjusting the MRCP and we intend to raise those as part of the broader reserve capacity review that is yet to commence.
- We consider that several points raised by Merredin Energy in our submission dated 3 October 2011 on the draft new market procedures PC_2011_06 were inadequately addressed in the IMO's Procedure Change Report dated 21 October 2011. Responses that dismiss issues or that simply refer to decisions previously made by the MRCPWG are unhelpful (particularly as Merredin Energy did not have representation on the MRCPWG and we had understood that the MRCPWG was a consultative committee rather than a decision making group). Responses of this nature have the potential to engender a lack of confidence in the consultation process. We recommend against such responses being prepared in relation to the current round of submissions.
- A major shortcoming with the current process is that the IMO did not (or did not have time to) assess whether the equity market risk premium and other five yearly WACC parameters needed to change. Because the market procedures provide the IMO with flexibility to adjust the five yearly parameters following a significant economic event, the IMO is duty bound to determine whether such an event has occurred. It must take that responsibility seriously.

- If the IMO was unable to make a determination in relation to a significant market event on its own, it should have commissioned a report and made that publicly available. Market participants are now left in the difficult situation where we have to argue that a market event has occurred to justify resetting the parameters rather than considering whether the restated parameters are appropriate.
- We understand that the WACC will increase based on feedback and statements from the IMO, PwC and stakeholders at the 4 January 2012 workshop. At this point, all we know is that PwC verbally suggested the 6% risk premium was too low. No alternate risk premium or supporting analysis has been put forward. This makes for an inefficient and non-transparent process. Market participants now have to comment on a parameter where we have no visibility of the IMO's position. This is like boxing at shadows.
- We strongly suggest a revised WACC report be made available for public comment prior to the final WACC and MRCP being adopted.
- The IMO's timetable for issuing a final determination by end January is overly aggressive. Issuing the draft MRCP report on 13 December 2011 and providing a one month public consultation period closing in mid January is unfair. It has been difficult for Merredin Energy (and presumably for other market participants as well) to muster appropriate resources and give due consideration to the MRCP issues over the Christmas/January period. We also question whether the current timetable provides the IMO sufficient time to consider comprehensively the points raised in this consultation process prior to publishing its final determination. This has the potential for market participants to lose confidence in the entire consultation process.
- In our view it would be far better for the IMO to take additional time to set an appropriate MRCP rather than rush the process and obtain an artificially low result. We would support the IMO extending the timetable and re-engaging with market participants where appropriate.
- The IMO's request that submissions to be limited to five pages does not appear justified. We suggest the IMO accepts all non-complying submissions. We also recommend that no such constraints be placed on future submissions.

2. Independent Advice from SKM

By way of background, Merredin Energy commissioned a detailed independent report on the MRCP from SKM in March 2011 prior to committing to build its peaking generator. In that report, SKM forecast the 2014-15 MRCP to be \$251,400.

We were shocked to see that several of the MRCP input parameters determined by SKM had changed substantially over the eight months to 24 November 2011 when SKM issued its final report to the IMO.

Key issues where there are apparent inconsistencies that the IMO should investigate further include:

- SKM informed Merredin Energy that it considered the existing MRCP approach to estimating the capital cost of a power station to be inherently conservative on the basis that a median estimate of a power station was inappropriate to set a maximum reserve capacity price. SKM advised that a more typical approach would see the MRCP price cap determined by reference to an 80 percentile plant cost. We were surprised that this was not highlighted in the various SKM reports recently provided to the IMO on the procedure change proposal and the 2014-15 PC costs. Prior to setting the final MRCP for 2014-15 the IMO should seek advice from SKM on this point.
- The IMO should also commission details on the cost difference between a median and 80 percentile plant cost from SKM. It should take a pragmatic view to setting the final PC-factor that incorporates

appropriate cost allowances. On our reading of the market procedures, the IMO has sufficient flexibility to account for an 80 percentile cost in setting the PC cost component of the MRCP.

- The escalation factors (detailed in Section 2.1 of the IMO's report) are also based on a central estimate rather than a more appropriate high case. Merredin Energy questions why nominal averages are being used when the factor that is being calculated is for the Maximum Reserve Capacity Price and a reduction for this is already applied within the 15% automatic discount. Clearly the upper end of the scale should be used or the automatic discount be fully removed. To include both of these seems nonsensical and unfairly benefits unhedged retailers by discounting the MRCP.
- We also note that section 2.4.1(f) of the market procedures specify that the average unit cost for transmission connection must be scaled up by 15%. A similar factor could be incorporated for PC costs.
- At the time SKM finalised its March 2011 report to Merredin Energy, SKM did not consider water cooling feasible at all new connection sites. SKM's logic was that imposing water cooling, water connection and water storage facilities for the generic power station could increase the capital cost per MW, particularly as inlet cooling would be uneconomical at many connection points. We had understood this was a key reason the previous market procedures had not specified that water cooling be included in the generic power station specifications.
- The fact that water cooling led to an automatic 8% reduction in the MRCP for 2014-15 suggests the power station capital costs have been underestimated. Where water cooling is uneconomic, those costs must still be incorporated in the MRCP under a strict interpretation of the new market procedures. This has not occurred.
- In calculating the power station capital cost, Section 2.1 of SKM's report to the IMO states:

"SKM issued enquiries to main equipment OEM's requesting the submission of current budgetary pricing quotations, for OCGT equipment in the 160 MW capacity range. No responses were received from these suppliers at the time of completing the report. The project costs are therefore substantially based on historical project information and the output of the Thermoflow cost modelling."

We initially had serious concerns regarding construction costs being understated. To find out that updated cost estimates had not been compiled by SKM makes us further question the degree of underestimation in that cost parameter.

The inconsistencies in the advice SKM provided to Merredin Energy and to the IMO is a serious concern.

3. Water Cooling

Merredin Energy is constructing an 82MW OGCT with inlet cooling. We have incurred costs around \$1m in order to connect to the Water Corp network to source water. We have also incurred significant civil costs for evaporative ponds. No details have been provided for water connection costs for the generic power connection plant. Because the market procedures have moved to average land and average transmission connection costs, it follows that average water connection costs should also be adopted across all the various generic site locations. Water costs must include:

- Capital costs for water connection costs and annual operating costs that include water rates (excluding water usage); or
- Water storage costs including tanks, water transport costs for initially filling tanks to provide 14 hours continuous operation, civil works for evaporative ponds, etc.

4. Transmission connection costs

In addition to the Western Power (WP) transmission costs, Merredin Energy spent considerable funds engaging SKM to complete the necessary dynamic studies to obtain DSOC. There has been no allowance for the costs of dynamic studies or other non-WP transmission costs.

5. Fuel storage costs

In SKM's March 2011 report to Merredin Energy, SKM estimated that the fuel storage costs should total \$4m. This is in line with the actual fuel costs incurred by Merredin Energy. We are therefore concerned that GHD has underestimated the fixed fuel costs.

SKM noted that a material cost component of bulk diesel fuel storage is whether the owner includes fire protection on that infrastructure and the overall specifications and quality of the fuel storage infrastructure. Any prudent owner of a peaking generator would opt for appropriate fire tanks and fire protection.

We have sought a reconciliation from SKM on the GHD fixed fuel cost report. SKM remains of the view that the overall installed fuel costs would be at least \$3m and more likely up to \$4m. We recommend the IMO revise the estimate to \$4m and, if necessary, seek clarification the cost differences between the GHD and SKM estimates. We would be happy to provide the IMO with copies of SKM's work to facilitate that process.

6. Carbon Tax

There has been no allowance for increases in domestic construction and fuel costs associated with \$23 carbon price and the other measures of the Clean Energy Act passed by the Australian Parliament last year.

7. WACC

Merredin Energy's memorandum to the IMO dated 2 January 2012 included a series of questions and supporting analysis on the WACC. The following comments on the WACC should be considered in conjunction with our previous memorandum:

- The expected rate of inflation (parameter (i)) should be derived from the difference in nominal and inflation linked bond yields published by the RBA. This methodology would be consistent with the market procedures.
- Instead, the methodology for determining expected inflation proposed by the IMO results in an artificially low real WACC. That methodology takes account of today's unusually low nominal bond yields but does not account for the low real yields on inflation linked bonds. Ignoring Commonwealth inflation linked bond yields on the basis of illiquidity will bias the WACC. It seems completely illogical that an approach to determining the debt market risk premium using illiquid Australian BBB bond yields and the non-existent AAA corporate bond yields was considered appropriate, but that Commonwealth inflation linked bond yields (which are more liquid and priced daily) should be ignored.
- The market risk premium should be well above 6.0%. We suggest it should actually be 10.1% based on the Bloomberg data set out in our memorandum of 2 January 2012.
- A market risk premium of that level is also supported by the recent academic paper *Adjusting the Market Risk Premium to Reflect the Global Financial Crisis* by Bishop, Fitzsimmons and Officer published in Finsia's Journal of Applied Finance JASSA Issue 1 2001. That paper clearly articulates that the forward market risk premium should be derived from empirical market volatility. That

paper states that the unit price of risk for estimating the CAPM parameters is 0.43 bps. The 0.43 result was based on the following:

Historical average market risk premium:	6.0% (observed)
Historical average volatility:	14.0% (observed)
Empirical risk per unit of volatility:	0.43 (calculated as 6.0% / 14.0%).

At the date of publication, Bishop et al found the market risk premium to be 9.7% based on the prevailing market volatility of 22.5%

The implied volatility of the SPI 200 futures index over the past one month period (14 December 2011 to 13 January 2012) was 24.7%. This measure of volatility is identical to that used by Bishop et al and results in a current market risk premium of 10.6% (calculated as 0.43 x 24.7%).

- We accept that the market risk premium is currently higher than usual. We also suspect the IMO may seek to take a longer term view that the market risk premium will revert to, say, 6% or 7% over the coming five years, and consider adopting some sort of weighted average market risk premium to give a market risk premium below 10%. We would caution against taking such an approach. However, if such an approach is taken, the WACC over the next five year period must remain higher than the expected long term average – otherwise providers of generation capacity would never receive compensation equal to the true 10.1 - 10.6% equity market risk premium prevailing at the present time. In our view, it would be better to set the WACC based on the higher actual equity market risk premium experienced now and change it in line with market adjustments in future years.
- As a final point on the equity market risk premium, we note that unhedged generators are fully exposed to movements in the market risk premium and other WACC factors. Participants wearing that downside risk should also participate in the upside. By design, end customers are exposed to the same risks through the retail electricity price. Because the market rules are designed that way, the increase in the equity market risk premium should be passed on via the MRCP. End customers have benefited from the fall in the risk free rate lowering the WACC. To pass through that benefit in full while protecting end users against the increase in the market risk premium creates an asymmetric payoff. This is not and has never been an intention of the market rules. We therefore recommend the full 10.1 - 10.6% equity market risk premium be incorporated in the 2014-15 MRCP.

We understand that because a significant economic event has occurred, all five yearly parameters are up for review. We have therefore commented on those other factors that are out of alignment with the market.

Asset beta:

- No justification for adopting an asset beta of 0.5 has recently been provided. This number is too low and was based on dated historical data that is unreflective of the risks associated with constructing and operating a WEM peaking generation plant. We suggest an asset beta should be at least 0.6 based on the analysis presented in our memorandum of 2 January 2012.

Debt issuance costs (parameter (d)):

- The debt issuance estimate of 0.125% pa is far too low and completely out of touch with reality. Debt issuance costs are intended to cover debt raising costs including arranger, agency, placement, company credit rating, issue credit rating, and legal fees as well as an allowance for a dealer swap margin. The proposed cost 0.125% is completely inadequate.

- An annual debt issuance cost of 0.125% is equivalent to an up front bank fee of 0.87% for ten year debt (calculated using a net present value calculation). No Australian bank would provide a ten year facility at such a low up front fee in the current market. In addition, borrowers have to reimburse the bank's legal fees for establishing the loan documentation and all other related costs mentioned above. The 0.125% allowance also ignores the potential for any ongoing costs associated with compliance or obtaining lender consents over the loan period. It also ignores the costs associated with refinancing shorter term debt. In the current market, refinancings should be expected every three to five years.
- Merredin Energy recently agreed on a \$50m facility at an upfront cost of 1.6%. This equates to an annualised cost of 0.23% assuming no subsequent refinancings. Because of the construction S-curve, we also have to pay a line fee on the undrawn component of the loan. The line fee should be included in the d-factor since it is a true and actual cost of obtaining the debt finance. The absolute minimum d-factor that could possibly be justified, after legal and other costs, would be 0.3% pa.

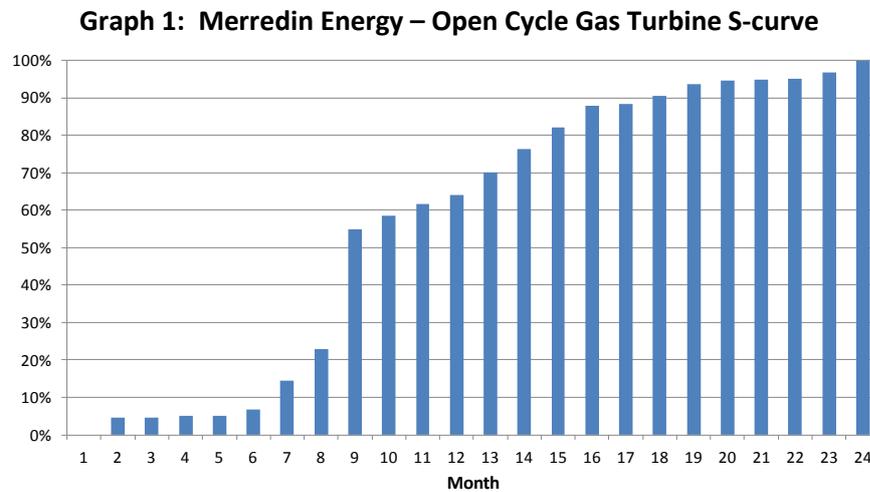
Debt risk premium (parameter (d)):

- The debt risk premium should not decrease one percentage point from the value adopted in the 2013-14 capacity year. Credit default swap rates, which represent the wholesale funding costs for Australian banks, have recently increased. Furthermore, the decrease in competition for loans has increased bank loan margins. The Basel III banking reforms are likely to see loan tenors decrease and loan costs increase, putting further pressure on the ten-year debt risk premium.
- The proposed methodology for determining the debt risk premium is flawed. It depends on historical AAA corporate bond yields which are non-existent in today's market and in any case the historical data is not relevant to the current cost of debt.
- The proposed debt risk premium methodology is also based on a flawed assumption that the yield differential between seven and ten year AAA corporate bonds should be identical to the yield differential applying to BBB bonds in today's market. A simple analysis of historical Commonwealth Government, AA and BBB yield curves shows that those curves are not parallel.
- Calculating the debt risk premium using AAA corporate bonds cannot be used for future calculations as Bloomberg is unable to provide relevant yield data. Shouldn't the IMO look at a better solution this year rather than waiting until next year when the methodology will have to be revised anyway?
- According to the market procedures, the debt risk premium is to be consistent with accepted Australian regulatory practice and take into account decisions of the Australian Competition Tribunal. In January 2012, the Australian Competition Tribunal made a decision in favour of gas distributor Envestra, who successfully appealed against the Australian Energy Regulator's determination. The Tribunal found that the regulator's sole reliance on the extrapolated Bloomberg value to calculate the debt risk premium to be erroneous, with the Tribunal adopting a debt risk premium of 4.67% based on analysis to mid 2011. This should be the absolute floor for the MRCP debt risk premium. In our view and accounting for recent development in capital markets, a debt risk margin of 5.25% (equal to that adopted by the IMO last year) would be acceptable.

8. WACC Period

Under the new market rules, the gross-up WACC period has been reduced from 24 months to 6 months.

The following graph for the Merredin Energy 82MW Power Plant (currently in month 18 of its construction phase) clearly shows that over 50% of the total project costs were spent in the first nine months of the project.



Merredin Energy previously suggested a 14 month gross up period be used rather than the proposed six months for the timeframe of the WACC. The graph above shows that it is completely unrealistic to assume no money spent in the first 12 months of a project. In deriving a six month period, PwC assumed a 12 month construction spend period, with construction completed the same day that capacity revenues commence. Prudent planning and construction timetables include buffers for testing periods and appropriate delay contingencies. Our view is that the six month period should be increased. The current WACC gross-up calculation also fails to recognise that equity is fully exposed to risks during the 24 month construction and commissioning period. Because equity is exposed during that full two year period, it should earn a risk premium for that entire period. Based on a 14 month average spend period, the true cost of capital during the two year development phase is:

$$(1 + \text{WACC})^{14/12} \times (1 + \text{WACC} - \text{risk free})^{10/12}$$

An adjustment to the capital raising costs within Margin (M) should be made to correct for this anomaly.

9. Annual Operating Insurance Costs

The IMO generally seeks to maintain an open and transparent process for setting the MRCP, with all the relevant consultant reports available via its website. However, it fell well short of its usual standard, having failed to commission or publish insurance reports.

It appears that the annual insurance costs are based on some informal conversations with insurance brokers. This is no way to set the MRCP parameters. We have no visibility on the policy exclusions or the deductibles that would apply.

Merredin Energy’s insurance broker Jardine Lloyd Thompson (JLT) provided us with a detailed estimate of insurance costs for asset replacement and business interruption. JLT’s advice is that premiums should total \$600,000 equivalent to 0.43% of the insured value for a generic 160 MW peaking plant. This cost excludes terrorism levy, stamp duty and GST and calculated on the following basis:

- 160MW OCGT generation plant with inlet cooling and an insured value equal to the MRCP power station capacity cost
- the assets are newly constructed and located in rural Western Australia below 26 degrees latitude
- the plant is diesel powered

- the retention levels are \$500,000 for property damage, 45 days for business interruption and \$100,000 for third party liability apply.

The quoted premium of \$600,000 is almost twice the IMO's cost estimate of \$321,000 for the asset replacement and business interruption insurance.

10. Construction insurance

Under the new market procedures, construction insurances have been removed from the Margin (M) and included in the EPC estimate, with no reduction intended in the overall level of construction insurance.

The reality is that the overall cost of insurance premiums have reduced the MRCP. No explicit allowance has been made in the EPC for insurance costs. To illustrate how far removed the insurance estimates are from reality we are prepared to disclose the specific insurance arrangements for Merredin Energy.

Merredin Energy has contracted with CTEC to undertake all construction works under a turnkey EPC contract. Under the EPC contract, CTEC maintains its own insurances for the following items:

- Professional Indemnity Insurance
- Workers' Compensation Insurance
- Motor Vehicle Insurance
- Property Insurance for the full replacement value of and covering contractor's plant and equipment
- Any other insurance or cover required by law

In addition to indirectly covering a portion of the CTEC's overhead insurance costs via the EPC price, Merredin Energy has had to take out the following insurance cover during construction:

- Construction Material Damage
- Construction Advanced Business Interruption
- Construction Liability (General and Products Liability)
- Construction Marine Cargo & Marine Advanced Business Interruption
- Directors and Officers Insurance

Merredin Energy's insurance premiums for the above policies totalled \$600,000 in our first year of construction. By the time construction finishes, a second full year of premiums will have been incurred, bringing our direct construction insurance costs to around \$1m (or \$12,000 per MW). This significantly exceeds the provision made by SKM in its M factor of only \$3,200 per MW. SKM's estimate would barely cover the marine insurance for shipping turbines from Europe.

We would question whether SKM are appropriately qualified to opine on insurance. We recommend that the IMO undertakes further work to ensure the insurance component of the Margin (M) is set at a more reasonable level prior to finalising the 2014-15 MRCP.

11. Margin (M)

We were surprised to see project management, legal costs and owners engineering costs reduce slightly in percentage terms particularly as the scope of works now extend to include water cooling and related infrastructure. The upfront legal costs associated with registration and compliance with the Clean Energy Act should have added to legal costs, not reduced them. We recommend that those costs be reassessed.

The proposed 3.0% allowance for financing costs was based on SKM's opinion that:

"3% is considered consistent with the 4% allowance applied in 2010, deducting an approximate amount for the debt issuance costs that have been removed." See section 6.4 of SKM's report to the IMO dated 24 Nov 2011.

Under the proposed WACC, debt issuance costs total 0.125% pa on the 40% enterprise value that is debt funded. This results in an annual debt financing cost of only 0.05% pa of the enterprise value.

Assuming that cost applies for 15 years, the net present value of that cost is 0.45%, well below the 1% reduction (from 4% to 3%) suggested by SKM. SKM's calculations were erroneous and, using their own logic, the correct calculation should result in a 3.55% capital raising cost (before adjusting for the WACC gross-up detailed in section 8 of this submission).

Moving debt issuance costs from Margin to the WACC should not reduce the MRCP. This is the same problem experienced with moving the insurance premiums from the Margin to the EPC contract. There is no magic pudding. The MRCP should not drop simply because costs are reshuffled.

12. Stamp duty on land acquisition

No allowance has been made for stamp duty on the land acquisition.

Section 2.2.1 of the market procedure states "The Maximum Reserve Capacity Price must include all reasonable costs expected to be incurred in the development of the Power Station". On that basis, Margin M should specifically include stamp duty.

13. Gross up for Goods and Services Tax

Where a WEM generator is unable to claim the full amount of the GST, the costs should be grossed up for that portion of GST.

GST can not be fully claimed for the following items:

- Equity raising fees. These should be grossed up by 1.10.
- Debt raising fees. These should be grossed up by 1.025 to account for reduced input tax credits.
- Accounting, legal and other fees pertaining to establishment, equity raising and debt raising costs.

The relevant Margin and WACC factors should be grossed up to account for GST leakage.



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19 December 2012

Attn: Mr Greg Ruthven
Manager, System Capacity
Independent Market Operator
PO Box 7096
Cloisters Square, Perth, WA 6850

By email: imo@imowa.com.au

Dear Sir

SUBMISSION ON THE IMO'S DRAFT MRCP REPORT FOR 2015-16 CAPACITY YEAR

Merredin Energy is a participant in the South West Interconnected System and owner of the 82MW peaking generation plant recently constructed in Merredin, WA. We welcome the opportunity to provide the attached submission on the Independent Market Operator's Draft Report on the 2015-16 Maximum Reserve Capacity Price published in November 2012.

Yours sincerely

Julian Widdup
Director

SUBMISSION ON THE IMO'S DRAFT MRCP REPORT FOR 2014-15 CAPACITY YEAR

MRCP Review Process

Merredin Energy considered the MRCP for 2014-15 to be materially lower than the actual costs of building a new open cycle gas turbine power station. We were therefore surprised to see the 2015-16 MRCP has fallen a further 3.9% from the previous result.

Merredin Energy is concerned that the continued downward revisions to the MRCP may be a policy response to a preconceived view that the reserve capacity price is too high. The MRCP should not be used to limit new capacity and we note the IMO does not have a stated policy objective to limit excess capacity.

We recognise that sustained over supply of generation capacity results in economic inefficiencies. The Merredin Energy plant was constructed in response to the high demand forecasts contained in previous Statements of Opportunities and the previously MRCP levels (which had made the project economic). The excess supply, which is currently depressing the RCP, is having an adverse effect on Merredin Energy and other generators.

The volume of excess capacity is being compounded by demand side management (DSM). DSM should not be seen as a substitute for peaking capacity. The development of the Merredin power station has added permanent capacity. DSM is not permanent. Participants can opt in and out of the scheme. Furthermore, DSM is not subject to the same testing or dispatch regime or refund penalties and should not receive the Reserve Capacity Price. Generators' reserve capacity revenues are being inappropriately discounted due to the surplus capacity associated with the large degree of DSM registered in the market. While there is a place for DSM in the WEM, we call on the IMO and the RCP Working Group to immediately address the adverse impact and disadvantages borne by generators. At a minimum, DSM should be tested regularly and subject to refunds.

MRCP 15% discount

Merredin Energy encourages the IMO to remove the 15% discount to the MRCP. We believe a review of that parameter would have been more important than several of the other parameters that were recently reviewed.

Merredin Energy recognises the importance and benefit of having the Reserve Capacity Mechanism Working Group consider this issue and we understand the need for the Working Group's decisions to feed into the IMO's rule change proposals. However, our previous experience with making submissions as part of the MRCP public consultation process is that our comments often get little traction. We are always disappointed when the IMO's final report makes reference to previous decisions of a working group, particularly when the working group had not convened to consider the specific comments contained in the public submissions. This was a major shortcoming of the previous MRCP review process completed in 2011. Such a process significantly undermines the usefulness of the public consultation process and should be improved.

We also remain concerned around the delayed timeframe for removing of the 15% MRCP discount factor and recommend the IMO seeks to fast track the removal of that factor.

WACC

The WACC for the 2015-16 MRCP is too low. In our previous MRCP submissions to the IMO, Merredin Energy argued that the inflation, asset beta, equity market risk premium and debt issuance costs were inappropriate (with solid reasoning and evidence).

The IMO has reviewed only some of the existing WACC parameters, such as the gamma. It is poor public policy for the IMO to make judgement calls on which parameters to review and when. Best practice would see the IMO publish guidelines on that point. This would reduce the subjectivity present in the application of the current market procedures.

We note PwC's advice to the IMO dated 19 October 2012 titled *Re: Summary of regulatory decisions related to Reserve Capacity Price* discussed the equity market risk premium. Professor Robert Officer was quoted by PwC in that report, where Officer had made some good points in relation to the EMRP. We understand from PwC's correspondence that it agrees with Officer's stated position, particularly in respect of the risk free rate and EMRP needing to be set using consistent timeframes (either point in time or 'normalised levels'). Contrary to that advice, the current approach is uses inconsistent time periods, with normalised betas and EMRPs but a point in time parameter for the risk free rate. We suggest a review of the asset beta and EMRP is warranted immediately and prior to finalising the 2015-16 MRCP, particularly as the risk free methodology can not be changed barring an amendment to the market procedures.

Given PwC's advice, who were engaged as an expert adviser to the IMO, the IMO should be duty bound to consider and act on that advice of 19 October. Such action should result in a higher and more appropriate EMRP. The recent academic paper *Adjusting the Market Risk Premium to Reflect the Global Financial Crisis* by Bishop, Fitzsimmons and Officer published in FINSIA's Journal of Applied Finance JASSA Issue 1 2011 found the market risk premium to be 9.7% based on the prevailing market volatility at the time of publication. Recognising the movement in markets since that date, an EMRP around 7% would be realistic today.

We consider that financiers will be continue to be concerned by the volatility of MRCP changes and this will, in turn, increase the cost of funding. This volatility should feed into the asset beta and the WACC. We note that no justification for retaining an asset beta of 0.5 has been provided. This number was based on dated historical data that is unreflective of the risks associated with constructing and operating a WEM peaking generation plant. We suggest an asset beta should be at least 0.6 based on the analysis presented in our previous submissions to the IMO.

The expected rate of inflation (parameter (i)) should be derived from the difference in nominal and inflation linked bond yields published by the RBA, rather than taking a single one year projection of 3.25% and nine years of 2.5% which is largely an arbitrary assumption. The IMO's existing methodology is inconsistent with the market procedure as the RBA has not published specific inflation forecasts out to 2022. Using RBA published bond yield data for bonds maturing in 2022, without interpretation or extrapolation, would be consistent with the market procedures and give a more sensible expected inflation result. Based on RBA published bond yield data (as underpinned in Graph 5.9 of the RBA's Statement on Monetary Policy November 2012), long term expected inflation (parameter (i)) should be 2.1%. The RBA inflation linked bond data can be sourced from the following link:

<http://www.rba.gov.au/statistics/tables/xls/f02dhist.xls?accessed=2012-12-19-16-46-21>

Fixed Fuel Costs

In order to achieve practical completion and reserve capacity certification, a new power generator needs to complete successfully a series of commissioning tests to meet System Management requirements. This include 'cold commissioning' prior to the connection to the Western Power network and 'hot commissioning' which involves the dispatch of power to the grid.

Merredin Energy consumed \$2m worth of diesel fuel to comply with the minimum Western Power testing requirements for commissioning our 82MW plant. For a 160MW power station, the fuel costs would have totalled \$4m.

As a result of the IMO's capacity credit timetable, the majority of our commissioning had to be undertaken during the months of August and September, when energy prices are typically low. Merredin Energy earned a negligible \$27,000 in STEM revenues from the generation of power during hot commissioning over the 2012 winter/spring period. The net fuel costs associated with commissioning had been ignored by SKM in its estimate of fixed fuel.

The fixed fuel costs should increase by \$4.0m for the notional 160MW power station.

General Operation and Maintenance Costs

SKM has significantly underestimated the general operation and maintenance costs.

Merredin Energy has recently entered into an O&M agreement and a separate energy dispatch services agreement. The cost of the energy dispatch services is a fixed annual fee of \$200,000 regardless of the GWhs generated.

The costs of the energy dispatch services have been completely ignored by SKM. The services are necessary in order to comply with the new balancing market regime including lodging all STEM and balancing bids, commissioning, testing, outage and other notices.

We have engaged Perth Energy to provide energy dispatch services and understand it is the only business that provides such services to independent generators. Accordingly, the fixed O&M costs in the MRCP must be increased by \$200,000. If the IMO is minded to continue ignoring those costs, we call on the IMO to make that service available to generators free of charge.

We note very little supporting information has been provided by SKM on the O&M components generally. We consider the general O&M costs including the allocations to plant operator labour and corporate overheads to be substantially understated. It might be useful for a further analysis of the O&M costs be undertaken prior to setting the final MRCP. It would also be useful for SKM to consider the costs associated with staying abreast of and complying with changes to the WEM procedures in the O&M costs.

O&M Consent Parameter

SKM estimated the annual costs of EPA charges and emissions tests to total only \$32,000. We would certainly welcome the opportunity for SKM to complete that work for Merredin at a fixed fee of that amount!

The cost of burning diesel for compliance tests should be included in the consent costs. Expected STEM revenues earned from the testing regime could be netted off the costs, although those revenues are likely to be negligible (as discussed above in relation to the commissioning costs). The consent cost parameter should also include the costs associated with maintaining and renewing generation licences and compliance with the Clean Energy Act (Cth) which is a recent additional obligation placed on generators.

Construction insurance

SKM's estimate of construction insurance costs has not been updated and remains inadequate at 0.4%. The IMO, in its report on annual insurance costs, noted insurance premiums had increased 22.5%. It is disappointing that had not identified by SKM as an issue prior to its report having been released. It may be sensible for construction insurance costs to be separately estimated as a MRCP parameter rather than being assessed by SKM and rolled into the M factor.

The construction insurance costs need to be amended to reflect current market rates. Furthermore, the extent of cover needs to be analysed and disclosed. Importantly, because of the capacity credit refund regime, construction insurance needs to cover consequential losses of 24 months for capacity credits refund liabilities (consistent with the approach applied to operational business interruption insurance) to cover loss events during construction that lead to subsequent capacity credit refunds.

Merredin Energy had to take out the following insurance cover during construction:

- Construction Material Damage
- Construction Advanced Business Interruption
- Construction Liability (General and Products Liability)
- Construction Marine Cargo & Marine Advanced Business Interruption
- Directors and Officers Liability Cover

Merredin Energy's insurance premiums totalled \$600,000 in our first year of construction. This represented around 0.8% of the EPC contract sum, prior to the 22.5% increase in premiums recently experienced. Based on our calculations, the insurance margin should be at least 1.0%.

We recommend that the IMO undertakes further work to ensure the insurance component of the Margin is set at a sensible level prior to finalising the 2015-16 MRCP.

Annual Insurance Costs

We consider the IMO's allowance for annual insurance costs insufficient.

Merredin Energy recently placed asset replacement and business interruption insurance with Chartis. As part of that process, Chartis required that we commission a site survey annually. Chartis quoted \$20,000 cost of the initial survey it was to conduct, with the survey cost charged to Merredin Energy. While that is only a modest cost in the scheme of insurance, we recommend the costs of annual insurance surveys be incorporated in the MRCP. Such a cost is necessary in order to achieve competitive premiums and we note the IMO's proposed rates appear very competitive!

The sums insured are not specifically identified but can be inferred. For asset replacement and business interruption insurance the sum insured should be increased to include:

- \$743,800 worth of liquid fuel stored on site. Stored fuel is a valuable commodity and in the event of a total loss, the insurer should be expected to meet the cost of refilling tanks. We remain perplexed as to why any owner of a power station would elect to exclude that from the sum insured.
- Following a total loss event and the rebuild of the plant, further commissioning and testing work would need to be undertaken. The costs of burning diesel to complete the commissioning work would ordinarily be borne by the insurer and therefore needs to be included in the sum insured. Based on Merredin Energy's recent commissioning experience (discussed earlier in this submission) we calculate the increase to the sum insured to be \$4.0m for this item.
- The costs of debris removal and decontamination expenses should also be included in the sum insured.

Merredin Energy's business interruption insurance policy has a 30 day deductible period. We would encourage the IMO to consider applying a lower deductible and increase the premium. If the IMO remains minded to maintain a 60 day deductible period (or \$4.3m), we would argue it is duty bound to include an allowance for the costs of forced outage refunds to reflect the cost of this self insurance. We would suggest a forced outage of two months for each 30 years of operations (i.e. an average cost of \$143,000 pa or 0.06% of the business interruption sum insured).

Any prudent owner of a power station should also maintain minimum workers compensation cover and pollution liability insurance. Pollution liability insurance covers the risks associated with the gradual leakage of diesel from the storage tanks and is essential for a power station owner with 815kL of diesel continually stored on site. These risks can lead to material financial losses and are not covered by standard asset replacement or business interruption insurance. The premia associated with these policies is should be added to the annual insurance costs.
