

IMPORTANT NOTICE

1. Purpose

(a) The purpose of Expressions of Interest is to provide the Independent Market Operator (IMO) with an indication from existing and potential new Market Participants of the amount of new generation and new Demand Side Management capacity they are willing to offer to make available as Reserve Capacity.

2. Precedence

- (a) Unless the context otherwise requires, the Market Rules take precedence over this Request for Expressions of Interest ("Request").
- (b) Where any conflict occurs between the provisions of the Market Rules and this Request, this Request will if required be read down to resolve the conflict. If the conflict remains incapable of resolution by reading down, the conflicting provisions shall be severed from this Request without otherwise diminishing the enforceability of the remaining provisions of this Request.

3. Cancellation and Variation

- (a) This Request has been prepared by the IMO using information available to the IMO at 31 January 2011.
- (b) The IMO reserves the right, at any time and from time to time, to cancel, vary, supplement, supersede or replace this Request or any part of this Request.
- c) If the IMO cancels, varies, supplements, supersedes or replaces this Request, then:
 - i. the IMO will publish a notice to this effect on its website (it is the Proponent's responsibility to check for such notices); and
 - ii. the Proponent shall not have any recourse against the IMO, the State of Western Australia, Minister, any person acting on behalf of the State of Western Australia, or Minister, any director, officer or employee of any of the preceding, or any adviser or consultant to any of the preceding ("Relevant Persons") whatsoever including for claims for any costs or expenses incurred up to and including the date that the Request or any part of this Request is cancelled, varied, supplemented, superseded or replaced.

4. Agreement by Proponent

In submitting a proposal, the person or persons proposing to provide Reserve Capacity (each a "**Proponent**") represents and agrees that:

- (a) (information true and correct) all information in its proposal is true and correct;
- (b) (comply with conditions) it will comply with clauses 1 to 6 of this Important Notice;
- c) (IMO not bound) other than as specified in the Market Rules:
 - i. this Request does not confer any obligations on the IMO; and
 - ii. the IMO is not required to undertake any further act in relation to this Request, or any act in relation to a proposal;
- (d) (relies on own enquiries) it relies entirely on its own enquiries in relation to all matters in respect of this Request and the Market Rules;
- (e) (understood Request) it has examined and understood this Request, each addendum issued under this Request, the Market Rules and any other information available to the Proponent in respect to this Request;
- (f) (made reasonable enquiries) it has examined all information relevant to the risks, contingencies and other circumstances having an effect on its proposal which is obtainable by the making of reasonable enquiries, which enquiries the Proponent has made;
- (q) (does not rely on warranties) it does not rely on any warranty or representation of a Relevant Person:
- (h) (no warranty as to accuracy) it acknowledges and agrees that no Relevant Person makes any warranty or representation, express or implied, in respect of the accuracy, reliability or completeness of this Request or any addendum issued or other information provided under or in connection with this Request;
- (i) (no unlawful arrangement) it has not entered into and will not enter into any unlawful arrangement with any other person in respect of this Request;
- (j) (own cost and expenses) it will pay its own costs and expenses in connection with:
 - i. the preparation and submission of its proposal; and
 - ii. any discussions, enquiries or negotiations with, or provision or consideration of further information to the IMO whether before or after the submission of any proposal; and
- (k) (liability) to the maximum extent permitted by law, no Relevant Person shall have any liability (whether arising from negligence, negligent misstatement, or otherwise) for or in connection with, or in connection with a person's use of or reliance on (including reliance on the currency, accuracy, reliability or completeness of), any statement, opinion, information or matter (express or implied) arising out of, contained in, derived from, or omitted from this Request.

5. IMO's rights

- (a) After 5pm on 2 May 2011, the IMO may request additional information from the Proponent in relation to the content of the proposal and if so requested, the Proponent must promptly provide such information to the IMO.
- 6. Disclosure of proposal
 - (a) Subject to this clause, the provisions of the Freedom of Information Act 1992 (WA), and the provisions of the Market Rules, the IMO will not make public any information in a proposal that the Proponent expressly and reasonably nominates in its proposal as confidential, unless:
 - i. such information comes into the public domain other than by breach of this clause;
 - ii. the IMO is required by the ASX, court order, governmental agency, Parliament or a committee of Parliament, or law to disclose such information;
 - iii. it is necessary to disclose such information in relation to the discovery of documents, or any proceeding before a court, tribunal, ACCC, other governmental agency or stock exchange; or
 - iv. the IMO has written consent from the Proponent (which must not be unreasonably withheld) to disclose such information.
 - (b) The Proponent agrees and acknowledges that the powers and responsibilities of the Auditor General for the State under the Financial Administration and Audit Act 1985 (WA) are not affected in any way by this Request.
 - (c) By submitting a proposal, the Proponent releases each Relevant Person from all liability whatsoever for any loss, injury, damage, liability, costs or expense resulting from the disclosure of the proposal under this clause.

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REPORT DETAILS

Report Title: Wholesale Electricity Market: Request for Expressions of Interest for the

2011 Reserve Capacity Cycle

Version No.: 1.0.0 Release Status: Final Confidentiality Status: Public



Request for Expressions of Interest

The Independent Market Operator (IMO) is seeking Expressions of Interest for the provision of new generating capacity and Demand Side Management within the South West interconnected system (SWIS) of Western Australia.

Proponents may offer new generating capacity or Demand Side Management options.

New Facilities must be available for commercial service by 1 October 2013.

Proponents will be invited to apply for certification of Reserve Capacity for their proposed Facilities in May 2011.

Proponents whose proposed Facilities are certified may subsequently apply for assignment of Capacity Credits.

The total capacity required to meet peak demand, plus a reserve margin, will be determined through the Long Term Projected Assessment of Supply Adequacy, the results of which will be published in the Statement of Opportunities Report in June or July 2011¹.

Based on current information, including the IMO's most recent electricity demand estimates, there is an estimated excess in capacity of 58 MW for the 2013/14 Capacity Year.

Queries and completed Expressions of Interest are to be sent to:

General Manager, Development

Independent Market Operator PO Box 7096 Cloisters Square PERTH WA 6850 AUSTRALIA

Proposals can be submitted electronically to system.capacity@imowa.com.au

Applicants must include the Expression of Interest form, available in Appendix 3 or on the IMO website: (www.imowa.com.au/eoi) as part of their submission.

All Expressions of Interest should be submitted by **5.00pm Western Standard Time on Monday**, **2 May 2011**.

¹ The deadline in the Market Rules for publication of the Statement of Opportunities is 1 July. This may change pending the outcome of Rule Change Proposal RC_2010_14. Please see http://www.imowa.com.au/RC_2010_14 for information on the Rule Change Proposal.



Executive Summary

This document invites proponents to provide Expressions of Interest for the provision of generation and Demand Side Management capacity into the SWIS in Western Australia. It is the first step in the 2011 Reserve Capacity Cycle to secure new capacity that will be available for service from October 2013 through to October 2014.

The main purpose of the Request for Expressions of Interest is to alert prospective investors to the Reserve Capacity Mechanism and to enable proponents to provide information to the IMO on projects under consideration. Submitting an Expression of Interest will also ensure that the proponent receives all information and updates that are published in respect to the process, including the Reserve Capacity Information Pack.

In addition to submitting an Expression of Interest, project proponents are strongly encouraged to commence the processes required to secure access to the transmission system and to secure environmental approvals. Both of these processes are likely to be on the critical path of any new power project.

Based on the forecasts presented in the 2010 Statement of Opportunities, there is an estimated capacity surplus of 58.613 MW for the 2013/14 Reserve Capacity Year. Developers may still offer new capacity for certification during this Reserve Capacity Cycle, and under some conditions may be eligible to receive Capacity Credits for new Facilities.

For further information on any aspect of the Reserve Capacity Mechanism, proponents are encouraged to contact the IMO directly at system.capacity@imowa.com.au.



Introduction

The purpose of the Expressions of Interest process is to provide the IMO with an indication from existing and potential new Market Participants of the amount of new generation and Demand Side Management capacity they are willing to offer to make available as Reserve Capacity.

Energy sales within the SWIS, which covers the populous south-west portion of Western Australia, are expected to grow at approximately 3.7% per annum, as projected in the 2010 Statement of Opportunities (SOO) forecasts. Growth in electricity peak demand is forecast at around 4.4% per annum, supported mainly by a high level of air conditioning penetration within the residential sector.

The publication of this Request for Expressions of Interest is the beginning of the seventh Reserve Capacity Cycle. Expressions of Interest (EOI) are invited from proponents for new generation and DSM capacity which will be available for commercial service from 1 October 2013 through 1 October 2014². Expressions of Interest are due to the IMO by 2 May 2011.

All demand forecasts in this report are taken from the 2010 SOO published by the IMO³.

³ The SOO for 2010 is available at http://www.imowa.com.au/f176,536784/2010_IMO_SOO_rev1.pdf



² Note that capacity payments for new facilities can commence from 1 June 2013.

Background to the Electricity Sector in Western Australia

Western Australia is geographically large, covering approximately one third of the Australian continent, and the electricity supply industry comprises a number of distinct systems serving the more populous areas. The two main systems are:

- the SWIS, supplying the south west of the State and communities north to Kalbarri, south to Albany and east to the Goldfields (shown in Figure 1); and
- the North West Interconnected System (NWIS), which supplies major towns in the Pilbara Region.

With an annual energy consumption of about 17,000 GHz, the SWIS is by far the largest electricity system in Western Australia and provides electricity to approximately 950,000 end use customers, the majority of whom are located in the Perth metropolitan area.

This Request for Expressions of Interest, and the information provided in respect to the Wholesale Electricity Market (WEM), relates to the SWIS.



Figure 1 Western Australia and the South West Interconnected System



Forecast Electricity Demand

The maximum demand in the SWIS occurs in summer, with the peak strongly influenced by the specific weather circumstances. Forecasts of peak demand are prepared on the basis of three defined probability standards:

- A 10% probability of exceedance (PoE) forecast, which is one that is not expected to be exceeded more than once in every ten years;
- A 50% PoE forecast, which is not expected to be exceeded more than once in every two years; and
- A 90% PoE forecast, which is not expected to be exceeded more than nine times in every ten years.

The 10% POE system peak demand for 2013/14 is forecast at 5,370 MW and is expected to grow at around 4.4% per annum over the next ten years as shown in Figure 2 below.



Figure 2 Forecast Maximum Demand (MW)

A number of mining and mineral processing loads, which are supplied by on-site generation, are also connected to the system. The full magnitude of these loads is not included in the SWIS forecasts, but an allowance is made for their reserve share as intermittent loads.

Electricity sales are forecast to grow at a lower rate to peak demand, with demand becoming more peaked. Based on expected economic growth forecasts, electricity sales are forecast to grow at approximately 3.7% per annum on average over the next ten years. Figure 3, below, shows the forecast growth in sent out energy for a range of economic growth forecasts.



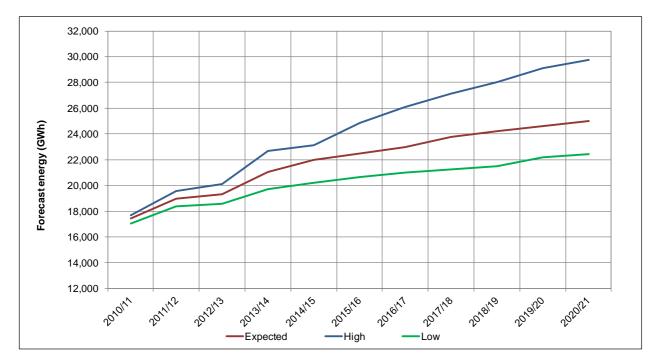


Figure 3 Forecast sent out energy (GWh)

More information on the IMO demand forecasts can be found in the 2010 Statement of Opportunities Report available on the following website: http://www.imowa.com.au/soo.

Power Stations and Fuel Supply

Western Australia possesses an abundant supply of fossil fuel resources, particularly coal and gas. In addition, Western Australia has generous supplies of renewable energy sources. Solar energy and wind are plentiful and there are a number of locations throughout the SWIS suitable for generating electricity using other renewable energy resources, such as wave and biomass.

Figure 4 below shows the levels of capacity by fuel type for the 2005/06 through to the 2012/2013 Capacity Years. This diagram shows the proportion of Capacity Credits by fuel type, where the Capacity Credit is a notional construct for capacity used in the WEM.



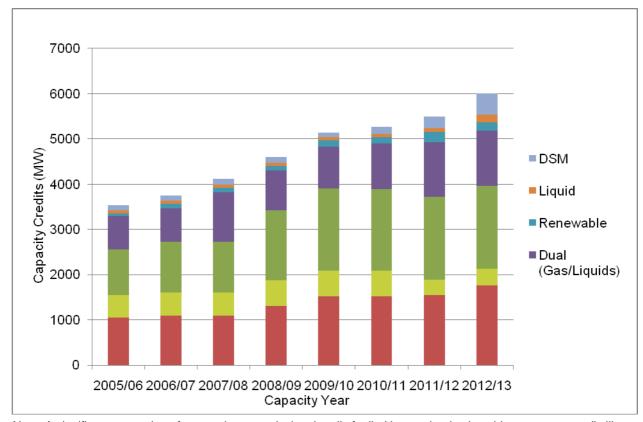


Figure 4 Proportion of generation capacity (by Capacity Credits) using various fuels

Note: A significant proportion of generating capacity is primarily fuelled by gas but is also able to operate on distillate.

Figure 4 shows that generation capacity in the SWIS is mainly provided by coal and gas fired plant with the balance provided by liquid fuels and renewable sources such as wind and landfill gas. There is also a small but significant portion of Demand Side Management capacity receiving Capacity Credits in the WEM.

Figure 5 below, shows that by 2012/13 Verve Energy is expected to provide around 56% of the total SWIS generation capacity, compared to 90% when the market started and 60% in 2010/11. Government is keen to encourage investment and diversity within the WEM and has placed a cap on the level of capacity that Verve Energy may own. This investment cap means that the proportion of independent capacity will increase over time.



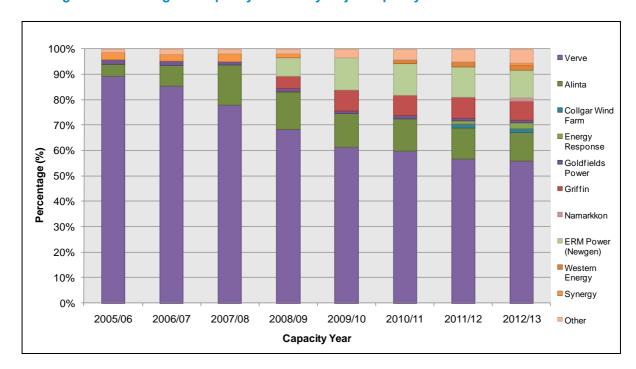


Figure 5 Percentage of Capacity Credits by Major Capacity Credit Providers - 2011/12

The provision of secure fuel supplies for power generation Facilities is one of the critical elements to the continued reliability of electricity supply within the SWIS. Firm fuel supply contracts (including transport capability in the case of gas fuelled projects) are required for projects to have their capacity certified. Certification of Reserve Capacity is the first step required for a Market Participant to receive Capacity Credits for its generation plant or DSM Facility.

Quantity of Capacity Required

Preliminary estimates for the 2013/14 Capacity Year are that the Reserve Capacity Requirement will be 5,937 MW⁴. This is based on the current Planning Criteria which includes an allowance for capacity to meet forecast peak demand, a reserve margin demand from intermittent loads, and an ability to maintain frequency keeping capability.

Approximately 5,541 MW of generating capacity is expected to be in service for 2013/14. In addition, Demand Side Management is expected to provide approximately 454 MW. Thus, based on the number of Capacity Credits assigned for 2012/13, there is likely to be excess capacity of 58.613 MW above the requirement for 2011/12, as shown in Figure 6. The IMO anticipates that all of this Capacity will be provided through Market Participants choosing to trade Certified Reserve Capacity bilaterally.



⁴ See Table 3 (page 42) of the 2010 SOO.

6500
6000
5500
5000
4500
3500
3000
2500
2000

Committed Projects
Demand Side Mangement
Existing Generation

Figure 6 Projected Plant Balance - 2011/12

The predicted capacity surplus is determined from the Capacity Credits assigned in the 2010 Reserve Capacity Cycle (for the 2012/13 Capacity Year) and the preliminary Reserve Capacity Requirement for 2013/14 published in the 2010 SOO. It is likely that the Reserve Capacity Requirement will differ from the preliminary value due to changes in forecast electricity demand, commitments to new plant that are currently being considered by Market Participants and/or new Demand Side Management initiatives. Proposed projects will be included in future determinations of the demand/supply balance based on data gathered through this Request for Expression of Interest process. These will be detailed within the future Statement of Opportunities Report.



The Reserve Capacity Mechanism

Introduction

One of the major requirements in developing an electricity market is to ensure that system reliability and security is maintained at an appropriate level. This issue is of particular importance in an isolated system such as the SWIS, where it is not possible to draw power supplies from adjacent systems.

The Reserve Capacity Mechanism is designed to facilitate the procurement of adequate generation and Demand Side Management capacity. It incentivises investment by providing tangible value for the provision of capacity.

A summary timeline for the process is shown in Figure 7. and the process is described in more detail below.

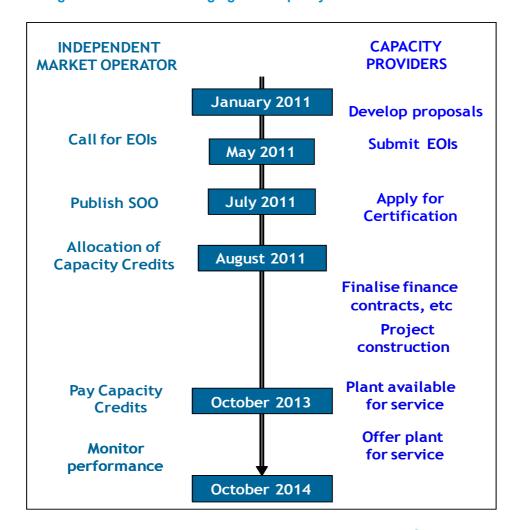


Figure 7 Timeline for Bringing New Capacity to the SWIS for 2011/12

Rule Change Proposal RC_2010_14, if accepted, may alter some elements of the timeline above. This amendment would see the SOO published in June, certification proposals submitted by 1 July and assessed by the IMO in July and August, and Capacity Credits allocated in September⁵.

The Reserve Capacity Mechanism provides the opportunity for generators to enter contracts to supply their capacity to retailers or other wholesale electricity purchasers. It is expected that in most years these contractual arrangements, or bilateral contracts, will encourage sufficient new capacity onto the SWIS to meet demand. However, in the event that the level of expected bilateral trades does not meet the capacity requirement, the IMO will conduct a Reserve Capacity Auction to secure additional supply.

Options that Proponents Can Offer

The Reserve Capacity Mechanism is open to Demand Side Management capacity as well as a range of generation plant. The IMO does not discriminate as to the type of Facilities offered and proposals for peaking, mid-merit or base load plant will be considered provided that they can meet the timing restrictions set out in the Wholesale Electricity Market Rules (Market Rules) and meet all other requirements of the Reserve Capacity Mechanism.

Capacity Credits

The Reserve Capacity Mechanism is based around the trade of "Capacity Credits", a notional construct representing either generation or Demand Side Management capacity. All Capacity Credits provided by Scheduled Generators are measured on a sent-out basis at 41 degrees Celsius.

Each year, the IMO prepares an assessment of the annual capacity that it estimates will be required over the coming ten year period. This assessment determines the capacity required to meet the forecast system peak demand while ensuring that the system reliability criteria are met. This information is published in July each year within the SOO Report. The 2010 SOO Report is available on the IMO website at www.imowa.com.au/soo.

As the IMO has estimated that 5,937 MW of generation and Demand Side Management capacity will be required during the 2013/14 Capacity Year, the IMO will place an obligation on retailers to fund these 5,937 MW of Capacity Credits based on their consumption at system peak times in the previous year. Each retailer will be obliged to secure adequate Capacity Credits to meet its Individual Reserve Capacity Requirement (IRCR). Retailers can either purchase Capacity Credits through bilateral arrangements or through the IMO. Figure 8 shows the energy and capacity arrangements that may exist between buyers and sellers.



⁵ See http://www.imowa.com.au/RC_2010_14 for further details.

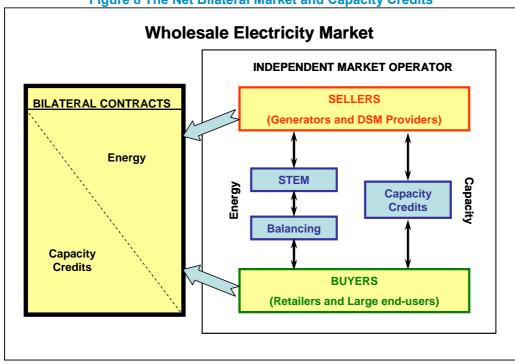


Figure 8 The Net Bilateral Market and Capacity Credits

A Capacity Credit payment is made to generators and Demand Side Management providers in return for making their capacity available to the system. There are a number of obligations imposed on providers, the most significant being that capacity must be offered to the system at all times, unless it is undergoing an approved outage. In the event that capacity is not offered to the system, such as during a forced outage, the holder of the Capacity Credits is required to refund payments to the market.

In keeping with the overall design of the market, it is anticipated that most Capacity Credits will continue to be traded through bilateral contract arrangements. The terms and conditions of bilateral contracts are negotiated between the generators and retailers and may vary in term, price and quantity. Just as they may represent longer-term or short-term agreements, these contracts may also be for the supply of energy or Capacity Credits or both.

Any remaining Capacity Credits that are not traded through bilateral contracts will be bought and sold through the IMO.

Capacity Credits have significant value. The Maximum Reserve Capacity Price for the 2013/14 Reserve Capacity Year is \$240,600 per MW per year.



Certification of Facilities

The reliability of the SWIS depends on generators and Demand Side Management providers delivering the capacity when it is required. The IMO undertakes a process of certification to ensure that:

- the Facility will be able to deliver the quantity of megawatts which the Market Participant has applied for; and
- the Facility can supply power into the SWIS by the date claimed if it is yet to commence operation.

From Monday 2 May 2011 through to Wednesday 20 July 2011⁶, a Market Participant may apply to the IMO to have the capacity of its plant certified for the purposes of the Reserve Capacity Mechanism. The Market Participant must demonstrate that its Facility will be able to deliver capacity into the SWIS within the required timeframe. The deadline for first date of delivery is 1 October 2013.

The level of Certified Reserve Capacity granted to the Facility will be the level of Capacity Credits that the Facility may be assigned by the IMO; either through the bilateral trade declaration process or through the Reserve Capacity Auction if one is held.

Clauses 4.9 through 4.11 of the Market Rules describe the process for applying for and setting of Certified Reserve Capacity. Further information, including the procedures to be followed, is available on the IMO website.

Information that must be provided by the applicant for certification includes:

- Details of the Facility;
- Capacity at 41 degrees Celsius and the temperature dependence of capacity;
- Key project dates;
- Information and evidence on fuel supplies; and
- Information on projected outage rates.

⁶ The deadline for lodgement of applications for Certified Reserve Capacity will change to 1 July 2011 if Rule Change Proposal RC_2010_14 is accepted. Please see http://www.imowa.com.au/RC_2010_14 for further details on this proposal.



In addition to the standard mechanism for certification of Reserve Capacity the Early Certified Reserve Capacity (ECRC) provisions in the Market Rules allow new projects with long lead times the ability to secure Capacity Credits earlier and provide greater certainty for investors. The rule change that implemented these provisions commenced 1 February 2010. For more information on ECRC and how it affects Capacity Credit allocations please refer to the final rule change report which can be found on the IMO website⁷.

Experience in Western Australia suggests that access to the transmission system and environmental clearance are on the critical path for projects. The Market Rules place two key requirements on the certification of Reserve Capacity for Facilities that have not yet entered service:

- The Facility must provide evidence that it has accepted an offer of access from the network operator in respect of the project, with the Facility entitled to have access from the service date nominated by the developer; and
- Evidence must be provided that any necessary environmental approvals have been granted or are expected to be granted by the proposed service date.

In addition to this, the IMO wishes to note the importance of proponents ensuring adequate fuel supply and transport provisions have been established prior to applying for Certified Reserve Capacity. Project proponents, and those wanting to re-certify their Facilities, must comply with the relevant sections of the Market Rules and associated Market Procedures in regards to fuel supplies. The main provision is that a Market Participant must be able to demonstrate it has access to firm fuel supply and transport arrangements so that the Facility can operate at maximum output for 14 hours each day.

Certification is required to be completed each year in order for a facility to be able to apply for Capacity Credits.

⁷ Please see www.imowa.com.au/f249,87592/RC_2009_10_FinalRuleChangeReport.pdf.



Assignment of Capacity Credits

Following successful certification, the IMO assigns Capacity Credits to Facilities through a twostage process. The first stage is through a bilateral trade declaration process where a Market Participant declares to the IMO that its intention is to hold bilateral contracts for trading its Reserve Capacity.

In respect of Bilateral Trade Declarations, the IMO assigns Capacity Credits to Facilities in accordance with a priority set out in the Market Rules. Capacity Credits are first assigned to all generators which are in existence, or are Committed, and which have indicated their intention to trade their capacity bilaterally. If this quantity of capacity is sufficient to meet the Reserve Capacity Requirement, no further Capacity Credits are assigned. However, if the required capacity level has not been reached, the IMO will then assign Capacity Credits to Facilities where the Market Participant has indicated its intention to trade capacity bilaterally, but the Facility is not yet committed. If further capacity is still required, the IMO will run a Reserve Capacity Auction.

An application to be assigned Capacity Credits through the Bilateral Trade Declaration process or through the Reserve Capacity Auction must be made by Wednesday, 10 August 2011⁸. Note that Market Participants are only required to declare that they intend to bilaterally trade their Capacity Credits; they are not required to have bilateral contracts in place when making this submission.

Payment for Capacity Credits

Proponents whose Facilities are cleared as bilateral trades, or in the Reserve Capacity Auction, will be allocated Capacity Credits and may receive payments for these, either through bilateral contracts or through the IMO. Please note that there is no guarantee that this plant will be dispatched in the energy market.

If it is necessary for the IMO to run a Reserve Capacity Auction, Participants who have indicated that they wish to enter the auction are able to bid any price between zero and the Maximum Reserve Capacity Price. For the 2013/14 Reserve Capacity Year the Maximum Reserve Capacity Price is \$240,600 per MW per year. The Reserve Capacity Auction will be cleared at a single price and this price will apply for all Capacity Credits. This includes any Capacity Credits that have been assigned during the Bilateral Trade Declaration process described above in the circumstances where these are uncontracted.

However, if a Reserve Capacity Auction is not held because enough capacity has been secured through bilateral trade nominations, the Market Rules set the price of all Capacity Credits based on a scale which takes into account any oversupply of Capacity Credits above the required

⁸ The deadline for lodgement of applications for Reserve Capacity Offers will change to 14 September 2011 if Rule Change Proposal RC_2010_14 is accepted. Please see http://www.imowa.com.au/RC_2010_14 for further details on this proposal.

level. Details surrounding the Capacity Credit price adjustment can be found in clause 4.29.1 of the Market Rules.

Table 1 shows the prices for Capacity Credits to 2012/13. The actual price of Capacity Credits for the 2013/14 Reserve Capacity Year will depend on whether a surplus is procured through bilateral trades, or if the Reserve Capacity Mechanism progresses to a Reserve Capacity Auction.

Table 1 Capacity Credit Prices in the Wholesale Electricity Market

Start Date	End Date	Maximum Reserve Capacity Price	Capacity Credit Price per MW per Year	Capacity Credit Price per MW per Month
21 Sept 2007	1 Oct 2008	\$150,000	\$127,500.00	\$10,625.00
1 Oct 2008	1 Oct 2009	\$122,500	\$97,834.89	\$8,152.91
1 Oct 2009	1 Oct 2010	\$142,200	\$108,458.57	\$9,038.21
1 Oct 2010	1 Oct 2011	\$173,400	\$144,235.38	\$12,019.62
1 Oct 2011	1 Oct 2012	\$164,100	\$131,804.58	\$10,983.72
1 Oct 2012	1 Oct 2013	\$238,500	\$186,001.04	\$15,500.09
1 Oct 2013	1 Oct 2014	\$240,600	TBA	TBA

The Capacity Credit payments will be made in twelve monthly payments equal to the number of Capacity Credits held by the Market Participant multiplied by the price per Capacity Credit as described above.

Reserve Capacity Auction Price Cap (Maximum Reserve Capacity Price)

There is a cap on offers into the Reserve Capacity Auction known as the Maximum Reserve Capacity Price. The cap is set having regard to the capital and fixed operating costs of a peaking plant that may run only during occasional periods of very high system demand. For this Reserve Capacity Cycle, the cap has been set at \$240,600 per MW per year.

Market Participants may offer plant into the Reserve Capacity Auction that has a higher capital cost than is used as the basis for calculating the Reserve Capacity Auction price cap, but their offers must still be at or below the level of the cap. It would be expected that such plant would seek to recover the balance of their fixed costs through selling electricity within the energy market.



Special Price Arrangements

If a Reserve Capacity Auction is held, new capacity that is cleared in that auction will have the option to take up a Special Price Arrangement. A Special Price Arrangement allows a Market Participant to receive the auction price, including an adjustment for inflation, for up to ten years from commissioning without being required to participate in the Reserve Capacity Auction again. This provides revenue certainty for new entrant generators.

If an auction is held, a Market Participant who has been assigned Capacity Credits through the Reserve Capacity Auction must nominate that it wishes to take up the option of the Special Price Arrangement no later than Tuesday 20 December 2011⁹, approximately two months after the Reserve Capacity Mechanism results are published. Special Price Arrangements are only available for new plant if a Reserve Capacity Auction is held.

Obligations on Facilities Receiving Capacity Credits

To facilitate the achievement of power system reliability and security standards of the Reserve Capacity Mechanism, all Facilities that have been assigned Capacity Credits are obliged to offer their capacity into the energy market at all times. Facilities can achieve this either through having commitments to supply energy under bilateral contracts to retailers (or directly to large loads), or through making an offer into the Short Term Energy Market.

Apart from approved outage periods, a Facility that fails to meet this obligation will be required to make a refund to the market in accordance with clause 4.26 of the Market Rules.

Facilities are also required to:

- Participate within the centralised maintenance planning arrangements;
- · Accept Dispatch Instructions from System Management; and
- Submit to regular Facility tests undertaken by the IMO.

⁹ The deadline for lodgement of applications to take up the option of any Special Price Arrangements will change to 21 September 2011 if Rule Change Proposal RC.2010.14 is accepted. Please see http://www.imowa.com.au/RC_2010_14 for further details on this proposal.

Potential Changes and Rule Improvements

The WEM has been in operation for four years and has achieved significant outcomes, particularly in providing incentives for increased private investment in generation capacity. However, the continuing strong growth in demand in Western Australia followed by the global financial downturn has clearly impacted on the electricity sector and operation of the WEM and has focused attention on some key aspects of the WEM.

The Market Evolution Program (MEP) is an industry led exercise aimed at assessing and then implementing changes to some key aspects of the WEM, namely the introduction of competition into the provision of balancing and ancillary services and a move to a more dynamic Reserve Capacity refund scheme. The MEP was commenced in 2010 to develop a number of key market design issues, aimed at improving overall market performance, as highlighted in the Verve Energy Review.

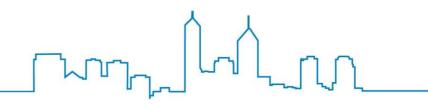
Changes are anticipated from the end of 2011, and include:

- more cost reflective Balancing pricing and opportunities to provide competition for balancing services;
- a greater ability to use more accurate information in the operation of the Short Term Energy Market (STEM);
- a more "real time" targeted Reserve Capacity refund system;
- more opportunities for competition in the provision of Ancillary Services; and
- a more adaptable IT system supporting the current WEM.

More information on the MEP is available on the IMO website¹⁰.

In addition there are currently a number of proposed Rule improvements under consideration in the rule change mechanism provided for under the Market Rules, Working Groups reporting to the Market Advisory (MAC), and other extended reviews. These areas of review relate to:

- Reserve Capacity Security;
- Reserve Capacity valuation for Intermittent Generators;
- certification of Reserve Capacity;
- allocation of Ancillary Service costs;
- Curtailable Loads & Demand Side Programmes;
- procurement of Network control services;
- incentives for dual-fuel Facilities; and
- the methodology for determination of the Maximum Reserve Capacity Price.



¹⁰ Please see http://www.imowa.com.au/mep.

For more information on these reviews please refer to the IMO website (www.imowa.com.au) or contact the IMO System Capacity team at system.capacity@imowa.com.au.



Proponent Requirements

Submitting an Expression of Interest

To submit an Expression of Interest, the proponent is required to develop an outline of a proposal for a specific generating plant, or a specific Demand Side Management response, at a defined location.

The proponent must then submit an Expression of Interest by 5.00pm, Monday 2 May 2011 Western Australian Standard Time, as required by clause 4.1.5 of the Market Rules.

The Expression of Interest submission must also include a completed Expression of Interest Form which can be found in Appendix 3. A copy of this form is also provided in Microsoft Excel format on the IMO website (www.imowa.com.au/eoi).

Expressions of Interest are to be sent to:

General Manager, Development

Independent Market Operator P O Box 7096 Cloisters Square PERTH WA 6850 AUSTRALIA

Proposals can be submitted electronically to system.capacity@imowa.com.au

Details on the Market Rules can be found on the following webpage: http://www.imowa.com.au/rule-changes



Certification of Reserve Capacity

Applications for Certified Reserve Capacity may be lodged with the IMO from Monday 2 May 2011 until Wednesday 20 July 2011¹¹ in accordance with clause 4.9.1 of the Market Rules. In accordance with clause 4.9.3, a Market Participant applying for Certified Reserve Capacity must provide to the IMO the data specified in clause 4.10.1.

In the case of an application for Certified Reserve Capacity for an intermittent generator that is yet to enter service, the Market Participant must also provide to the IMO the independent expert report described in clause 4.10.3 of the Market Rules.

Procedures outlining the steps that proponents are required to follow are available from the IMO web site. Potential investors are also advised to read the 'Guide for Potential Investors' document available on the IMO's website (www.imowa.com.au).

¹¹ The deadline for lodgement of applications for Certified Reserve Capacity will change to 1 July 2011 if Rule Change Proposal RC_2010_14 is accepted. Please see http://www.imowa.com.au/RC_2010_14 for further details on this proposal.



Table 2 Timetable for the 2011 Reserve Capacity Cycle

2011 Reserve Capacity Mechanism – Timetable			
Monday	31 January 2011	5.00PM	IMO Publish Request for Expressions of Interest (EOI)
Monday	2 May 2011	5.00PM	Close of EOI
Monday	16 May 2011	5.00PM	Announcement of the results of the EOI
Monday	2 May 2011	9.00AM	Participants may apply for Certification of Reserve Capacity
Friday	1 July 2011	5.00PM	IMO issues a new Statement of Opportunities
Friday	1 July 2011	5.00PM	IMO releases Reserve Capacity Information Pack
Friday	15 July 2011	5.00PM	Publish the Reserve Capacity Information Pack on website
Wednesday	20 July 2011	5.00PM	Applications for Certification of Reserve Capacity close
Friday	5 August 2011	5.00PM	IMO advises assignment of Certified Reserve Capacity
Wednesday	10 August 2011	5.00PM	Market Participants provide security deposits if they intend to bilaterally trade
Wednesday	10 August 2011	5.00PM	Market Participants advise how much of their Certified Reserve Capacity will be traded bilaterally and how much will be offered into the auction
Thursday	11 August 2011	5.00PM	IMO confirms to Market Participants the amount of certified bilateral capacity that can be traded bilaterally
Thursday	18 August 2011	5.00PM	IMO advises whether a Reserve Capacity Auction is required
Monday	22 August 2011	9.00AM	Lodgement of Reserve Capacity Offers opens (if auction required)
Monday	29 August 2011	5.00PM	Lodgement of Reserve Capacity Offers closes (if auction required)
Monday	29 August 2011	5.00PM	Market Participants provide security deposits if they intend to enter into Auction
Thursday	1 September 2011	5.00PM	IMO runs the Reserve Capacity Auction (if required)
Thursday	1 September 2011	5.00PM	IMO Publishes Reserve Capacity Auction results (if required)
Tuesday	20 December 2011	5.00PM	Market Participants advise IMO how many Capacity Credits each Facility will provide
Tuesday	20 December 2011	5.00PM	Market Participants notify IMO of any Long-Term Special Price Arrangements to be accepted
Friday	23 December 2011	5.00PM	IMO returns security deposits to Facilities that have not secured Capacity Credits in the auction

Please note that some of these dates will change if Rule Change RC_2010_14 is accepted.



Appendix 1 Transmission Network Access

Proponents participating in the Expressions of Interest process do not need to have finalised an Electricity Transfer Access Contract with Western Power for access to the electricity network.

However a proponent will be required to provide evidence that it has accepted an access offer before its Facility can receive Certified Reserve Capacity. The proponent must provide a letter from the Network Operator indicating that it has made an Access Offer in respect of the Facility and that the Facility will be entitled to have access within the timelines identified in the application for Certification of Reserve Capacity.

The actual timeframe for a proponent to receive a letter of offer from the Network Operator, as is required under clause 4.10.1(c)i of the Market Rules, may vary depending on the project and the existing queue of applicants. In some instances, the amount of time it takes to receive access to the transmission system may be substantially longer than the two-year time horizon of the Reserve Capacity Mechanism. For this reason, the IMO strongly encourages project proponents to contact Western Power as early as possible to ensure their project can progress through the Reserve Capacity Mechanism.



Appendix 2 Environmental Approvals

Clause 4.10.1 of the Market Rules refers to the environmental approval requirements and the need for project proponents to have arrangements in place when submitting an application for Certified Reserve Capacity. This reflects a relatively tight timeframe between the running of the Reserve Capacity certification process and the required service date for new Facilities.

It should be noted that environmental approval is not required to submit an Expression of Interest.

Proponents must refer their projects to the Environmental Protection Authority (EPA) as the first step in securing environmental approvals.

The EPA provides a substantial amount of information on its website at www.epa.wa.gov.au and proponents are strongly encouraged to read this.

It should be noted that the EPA will require sufficient time to assess all documentation received from proponents and make a recommendation to the Minister for the Environment. The Minister will then require time to consider this recommendation and make a formal decision.



Appendix 3 Expression of Interest Form

PROPONENT DETAILS			
Name of proponent			
Contact person			
Contact person's position			
Address			
Phone			
Email			
Fax			
FACILITY DETAILS			
Name of Facility			
Location			
Is the Facility: (Please tick the appropriate option)	 ☐ An intermittent generator. ☐ A non-intermittent generator serving an intermittent load. ☐ A non-intermittent generator not serving an intermittent load. ☐ A form of demand side management. 		
FACILITY CAPACITY			
Maximum Capacity available (MW)			
For non-intermittent generators: capacity at 41°C (MW)			
For non-intermittent generators serving an intermittent load: capacity required to serve intermittent load (MW)			
For intermittent generators, anticipated Capacity Credit assignment (MW)			
For demand side management, expected hours of availability per year			



CONSTRUCTION AND APPROVALS	
Expected earliest date that the Facility will be available to be fully operational	
Offer for network access: (Please tick the appropriate option)	Has been made by Western Power Networks. Has been applied for and is being processed. Has not been applied for.
Environmental approvals: (Please tick the appropriate option)	Have been granted. Have been applied for and are being processed. Have not been applied for.



Appendix 4 Results from Past Reserve Capacity Cycles

The following information is presented in accordance with clause 4.3.1(c) of the Market Rules. Table A1 details Capacity Credits information for the Reserve Capacity Cycles and Table A2 shows availability curve information. Table A2 shows both the Availability Curve and the Demand Side Management opportunity information.

Table A1 Capacity Credit Information

Item	2010/2011	2011/2012	2012/2013
Reserve	5,146 MW	5,191 MW	5,501 MW
Capacity			
Requirement			
Reserve	No Auction	No Auction	No Auction
Capacity Auction			
Requirement			
Number of	5,258.55 MW	5,493.486 MW	5,995.613 MW
Capacity Credits			
Acquired by IMO			
Maximum	\$173,400 per MW per	\$164,100 per MW per	\$238,500 per MW per
Reserve	year	year	year
Capacity Price			
Reserve	\$144,235.38 per MW	\$131,804.58 per MW	\$186,001.04 per MW
Capacity Price	per year	per year	per year
Monthly Reserve	\$12,019.62 per MW per	\$10,983.72 per MW per	\$15,500.09 per MW
Capacity Price	year	year	per year



Table A2 Availability Curve Data

Availability Curve Data	2010/2011	2011/2012	2012/2013
Availability Curve			
- at least 24 hours in the year	5,146 MW	4,171 MW	4,490 MW
- at least 48 hours in the year	5,095 MW	4,068 MW	4,338 MW
- at least 72 hours in the year	5,011 MW	3,953 MW	4,239 MW
- at least 96 hours in the year	4,905 MW	3,925 MW	4,158 MW
Demand Side Management			
Opportunities by Class			
1. 24 to 48 hours in the year	51 MW	1,123 MW	1,163 MW
2. 48 to 72 hours in the year	84 MW	114 MW	99 MW
3. 72 to 96 hours in the year	106 MW	29 MW	81 MW
4. 96+ hours in the year	4,905 MW	3,925 MW	4,158 MW

The information presented in the Demand Side Management opportunities section of Table A2 shows the maximum amount of Demand Side Management that can be procured within each Availability Class before the SWIS would experience energy delivery problems. It is noted that the figures presented for each year are those used in that relevant Reserve Capacity Cycle. The latest Availability Curve can be found in the 2010 Statement of Opportunities Report.

Demand Side Management procured within a higher Availability Class can also be used to contribute to the requirements of a lower Availability Class. Availability Class 1 (96+ hours in the year) represents a higher class than Availability Class 2 (72 to 96 hours in the year), and so on.



Appendix 5 Glossary of Key Terms

Availability Class: Any one of four classes of annual availability of Reserve Capacity set out in clause 4.5.12(c) of the Market Rules, where each class corresponds to Reserve Capacity being available from a Facility for not more than a specified number of hours per year.

Balancing: The process for meeting supply and consumption deviations from contracted bilateral and STEM positions in each Trading Interval.

Base Load Plant: Generating plant that is generally scheduled to operate continuously except for reductions in output for maintenance.

Bilateral Contract: A contract formed between any two persons (excluding the IMO and System Management) for the sale of electricity by one of those persons to the other.

Capacity Credit: A notional unit of Reserve Capacity provided by a Facility during a Capacity Year. Each Capacity Credit is equivalent to 1 MW of Reserve Capacity.

Certified Reserve Capacity: For a Facility it is the quantity of Reserve Capacity that the IMO has assigned to the Facility for the Reserve Capacity Cycle. Certified Reserve Capacity assigned to a Facility registered by a Market Participant is held by that Facility.

Curtailable Load: A Load through which electricity is consumed where such consumption can be curtailed at short notice in response to a request from System Management to the party managing the Load.

Demand Side Management (DSM): A type of capacity held in respect of a Facility connected to the SWIS; specifically, the capability of a Facility connected to the SWIS to reduce its consumption of electricity through the SWIS, as measured at the connection point of the Facility to the SWIS.

Dispatch Instruction: A direction from System Management to a Generating Facility or Demand Side Management Facility to increase, decrease or otherwise vary its production or consumption of electricity.

Dispatchable Load: A Load, with a rated capacity of not less than 0.2 MW, through which electricity is consumed where such consumption can be increased or decreased to a specified level upon instruction to do so by System Management to the person managing the Load.

Early Certified Reserve Capacity (ECRC): Reserve Capacity which is certified and assigned to a new Facility by the IMO for a future Reserve Capacity Cycle under clause 4.28C of the Market Rules.



Environmental Approval: In respect of a Facility is a licence, consent, certificate, notification, declaration or other authorisation required under any law relating to the protection or conservation of the environment for the lawful construction of the Facility or the development of the site on which the Facility is to be constructed.

IMO: The Independent Market Operator, established under the Wholesale Electricity Market Regulations to administer and operate the Wholesale Electricity Market.

Individual Reserve Capacity Requirement (IRCR): The MW quantity determined by the IMO in respect of a Market Customer, that represents that customer's contribution to total system load during peak times.

Intermittent Generator: A Non-Scheduled Generator that cannot be scheduled because its output level is dependent on factors beyond the control of its operator (e.g. wind).

Interruptible Load: A Load through which electricity is consumed, where such consumption can be curtailed automatically in response to a change in system frequency.

Load Forecast: An expectation of the demand levels in the SWIS or in a region of the SWIS in future Trading Intervals. The IMO publishes its Load Forecasts in the Statement of Opportunities.

Long Term Special Price Arrangement: A Special Price Arrangement that applies for more than one Reserve Capacity Cycle.

Market Rules: The set of rules which govern the operation of the Wholesale Electricity Market being the *Wholesale Electricity Market Amending Rules (September 2006)* and any subsequent amendments.

Mid-Merit Plant: Generating plant that generally operates during periods of medium and high demand.

Minister for Energy: The Minister responsible for administering the *Electricity Industry Act* 2004.

Network Operator: A person who owns, controls or operates a transmission or distribution system subject to clauses 2.28.3 and 2.28.16 of the Market Rules.

Non-Dispatchable Load: A Load which is not a Dispatchable Load, a Curtailable Load or an Interruptible Load, and is therefore self scheduled.

Peaking Plant: Generating plant that is generally operated only at times of high system demand.



Power System Reliability: The ability of the SWIS to deliver energy within reliability standards while maintaining Power System Adequacy and Power System Security.

Power System Security: The ability of the SWIS to withstand sudden disturbances, including the failure of generation, transmission and distribution equipment and secondary equipment.

Reserve Capacity: Capacity associated with a Facility. Capacity may be:

- i. the capacity of generation systems to generate electricity and send it out into a network forming part of the SWIS; or
- ii. Demand Side Management, being the capability of a Facility registered by the Market Customer at a connection point to a Network forming part of the SWIS to reduce the consumption of electricity at that connection point.

Reserve Capacity Auction: The process for determining the Reserve Capacity Price for a Reserve Capacity Cycle and the quantity of Reserve Capacity scheduled by the IMO for each Market Participant.

Reserve Capacity Auction Requirement: The quantity of Reserve Capacity, calculated in accordance with clause 4.15.2(b) of the Market Rules, which is the target quantity to be procured in a Reserve Capacity Auction.

Reserve Capacity Information Pack: A package of information, including the information described in clause 4.7.3 of the Market Rules, pertaining to a Reserve Capacity Auction.

Reserve Capacity Mechanism (RCM): The processes through which the IMO determines the required capacity to be available to the SWIS and ensures that this capacity is provided. The Reserve Capacity Mechanism is covered by Chapter 4 of the Market Rules.

Reserve Capacity Obligations: The obligations determined in accordance with clause 4.12 of the Market Rules which are placed on a Market Participant holding Capacity Credits.

Reserve Capacity Target: In respect of a Capacity Year, the IMO's estimate of the total amount of generation or Demand Side Management capacity required in the SWIS to satisfy the Planning Criteria for that Year.

Scheduled Generator: A generation system that can increase or decrease the quantity of electricity it generates and sends out into a network forming part of the SWIS (subject to limits on its physical capabilities) in response to instructions from System Management.

Short Term Energy Market (STEM): A forward market operated under Chapter 6 of the Market Rules in which Market Participants can purchase electricity from, or sell electricity to, the IMO.



South West interconnected system (SWIS): The interconnected transmission and distribution systems, generating works and associated works located in the south west of Western Australia and generally extending between Kalbarri, Albany and Kalgoorlie.

Special Price Arrangement: An arrangement whereby a Market Participant can secure a price for Reserve Capacity that may differ from the Reserve Capacity Price.

System Management: A segregated business unit of Western Power Corporation responsible for dispatching the power system.

Wholesale Electricity Market (WEM): The market established under Section 122 of the *Electricity Industry Act 2004*.

