



INDEPENDENT
MARKET
OPERATOR

Wholesale Electricity Market: Request for Expressions of Interest for the 2014 Reserve Capacity Cycle

February 2014

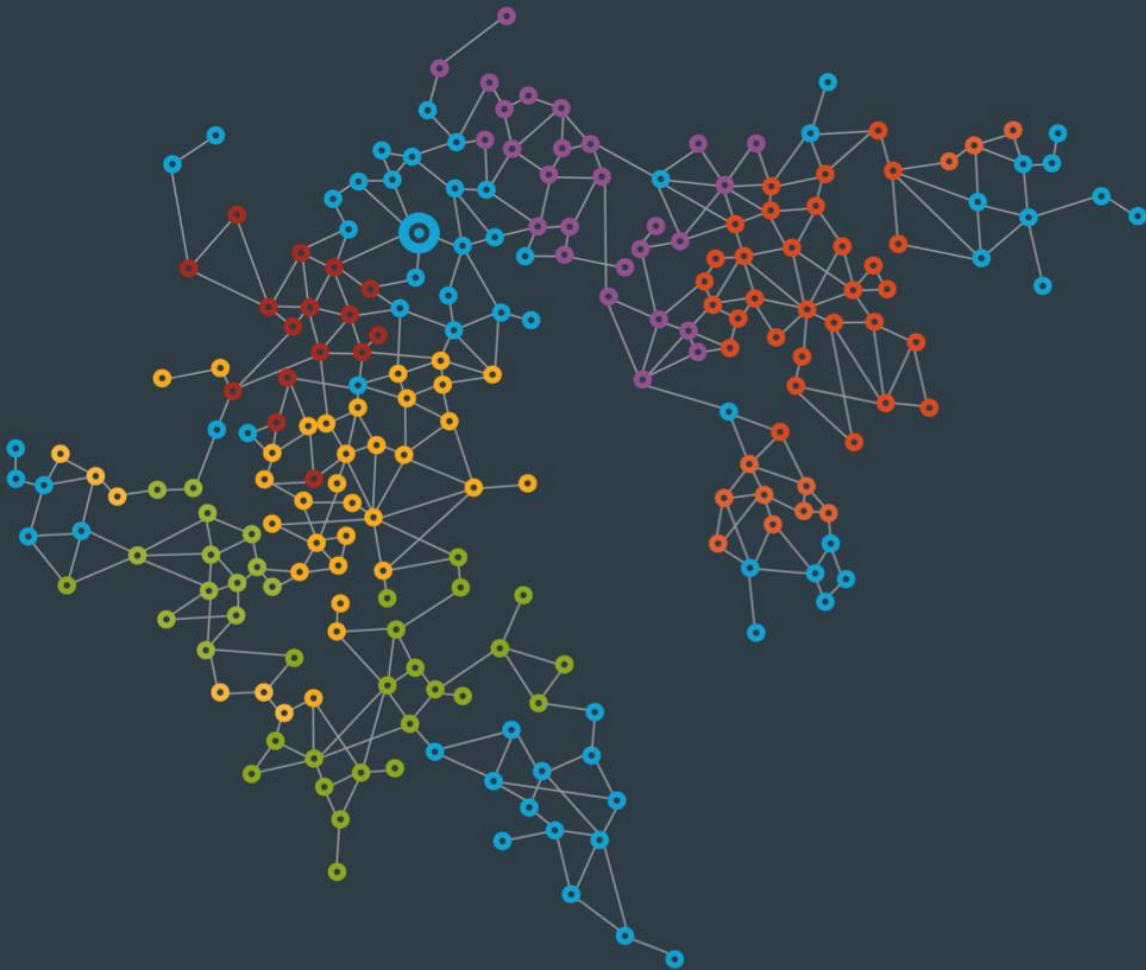


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REPORT DETAILS

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Request for Expressions of Interest

The Independent Market Operator (IMO) is seeking Expressions of Interest for the provision of new generation and Demand Side Management (DSM) capacity within the South West interconnected system (SWIS) of Western Australia for the 2016/17 Capacity Year.

New facilities must be available for commercial service by 1 October 2016.

Proponents will be invited to apply for certification of Reserve Capacity for their proposed facilities in May 2014.

Applicants whose 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 (LT PASA), the results of which will be published in the Statement of Opportunities Report in June 2014.

Based on current information, including the IMO's most recent electricity demand estimates, there is an estimated excess in capacity of 410 MW for the 2016/17 Capacity Year.

Proponents who wish to submit an Expression of Interest are advised to read the Important Notice contained in Appendix 1 of this document.

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

Manager, System Capacity
Independent Market Operator
PO Box 7096
Cloisters Square
PERTH WA 6850
AUSTRALIA

Expressions of Interest can be submitted electronically to system.capacity@imowa.com.au.

Proponents must include the Expression of Interest form, available in Appendix 2 and on the IMO website (www.imowa.com.au/eoi) as part of their submission.

All Expressions of Interest should be submitted by **5.00 PM Western Standard Time on Thursday, 1 May 2014**.

Executive Summary

This document invites proponents to provide Expressions of Interest for the provision of generation and DSM capacity into the SWIS in Western Australia. It is the first step to secure new capacity for the 2014 Reserve Capacity Cycle that will be available for service from October 2016 through to October 2017.

Expressions of Interest are invited from proponents for new generation and DSM capacity that will be available for commercial service in the 2016/17 Capacity Year (from 1 October 2016 through to 1 October 2017). Expressions of Interest are due to the IMO by 1 May 2014.

The main purpose of the Request for Expressions of Interest is to alert prospective investors to the Reserve Capacity Mechanism (RCM) 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 RCM process.

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 critical to the assignment of Certified Reserve Capacity and are likely to be on the critical path of any new power project.

Based on the forecasts presented in the 2013 Statement of Opportunities, there is an estimated capacity surplus of 410 MW for the 2016/17 Capacity Year. However, developers may still offer new capacity for certification during this Reserve Capacity Cycle.

Energy sales within the SWIS, which covers the populous south-west portion of Western Australia, are forecast to grow at approximately 1.9% per annum over the next decade, as projected in the 2013 Statement of Opportunities (SOO) forecasts. Growth in electricity peak demand is forecast at around 2.7% per annum for the 10% Probability of Exceedance (PoE) (one-in-10-year) scenario.

All demand forecasts in this report are taken from the 2013 SOO published by the IMO¹. The IMO will update these demand forecasts and publish the Reserve Capacity Requirement for the 2016/17 Capacity Year in the 2014 SOO, which will be published by 17 June 2014.

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

¹ The 2013 SOO is available at <http://www.imowa.com.au/soo>.

Background to the Wholesale Electricity Market 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, extending north to Kalbarri, south to Albany and east to the Goldfields (shown in Figure 1 below); and
- the North West Interconnected System (NWIS), which supplies major towns in the Pilbara Region.

Figure 1: Western Australia and the South West Interconnected System



With an annual energy consumption of about 18,000 GWh, the SWIS is by far the largest electricity system in Western Australia and provides electricity to over 1,000,000 end-use customers, the majority of which 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.

The WEM is broadly managed as follows:

- the IMO is responsible for the operation and development of the WEM, including administering the rule change process and undertaking long-term generation adequacy planning to support the RCM;
- System Management (a segregated unit of Western Power) is responsible for operating the SWIS in a secure and reliable manner, including short and medium-term system planning and management of dispatch, balancing and ancillary services in real time;

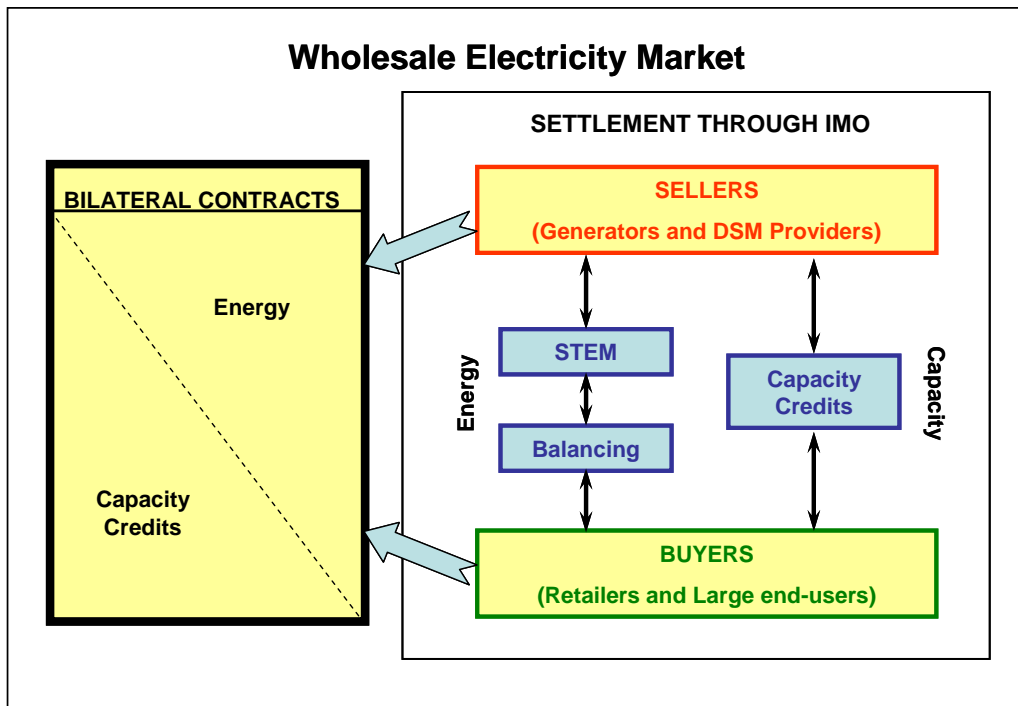
- Western Power is the Network Operator for the transmission and distribution network in the SWIS;
- The Economic Regulation Authority is the regulator of the WEM; and
- The Public Utilities Office, responsible to the Minister for Energy, advises on electricity policy issues.

The WEM includes the following mechanisms:

- the RCM, which ensures that sufficient generation and DSM capacity is available to meet the overall SWIS forecast demand;
- the mandatory day-ahead Short Term Energy Market, which allows Market Participants to trade around their bilateral energy positions;
- the mandatory Balancing Market, a gross pool market that determines dispatch of generation; and
- the contestable market for provision of Load Following Ancillary Services.

The WEM employs a bilateral net settlement system with respect to both energy and capacity, with the IMO facilitating settlement of energy and capacity that are not covered by bilateral contracts. The bilateral net settlement is depicted in Figure 2.

Figure 2: Bilateral Net Settlement (Energy and Capacity)

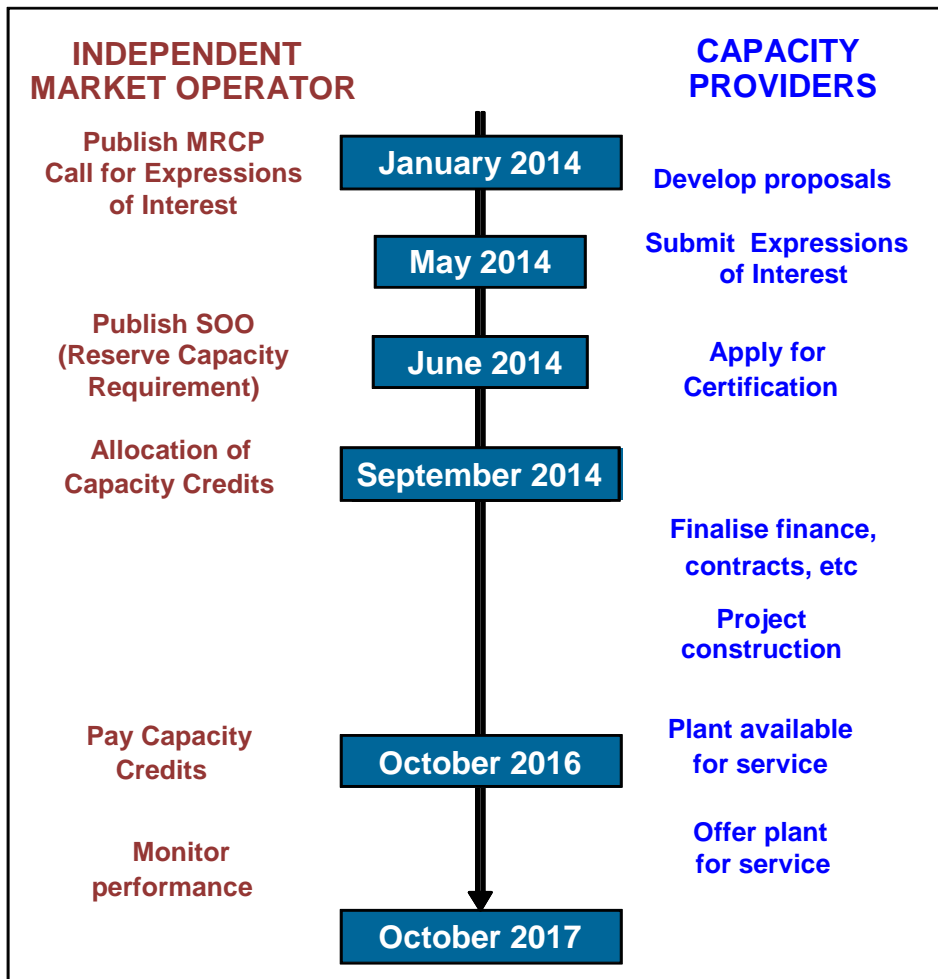


The structure and processes that constitute the WEM are established through the Wholesale Electricity Market Rules (Market Rules). The Market Rules can be downloaded from <http://www.imowa.com.au/rules/wem-rules>.

Reserve Capacity Mechanism Overview

A key feature of the WEM, and one that distinguishes it from the National Electricity Market operating in the eastern states of Australia, is the separate RCM. The RCM consists of a sequence of processes that ensure that sufficient generation and DSM capacity is available to meet the overall SWIS forecast peak demand. A summary timeline for the process is shown in Figure 3.

Figure 3: Timeline for Bringing New Capacity to the SWIS for 2016/17



The first objective of the WEM is to “*promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system*”.

System reliability and security are of particular importance in an isolated system such as the SWIS, where it is not possible to draw power supplies from adjacent systems. The RCM is designed to facilitate the procurement of adequate generation and DSM capacity to meet demand for electricity in the SWIS. It incentivises investment by providing tangible value for the provision of capacity.

Each year, the IMO prepares an assessment of the annual capacity that it estimates will be required in the next 10 years. 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 June each year within the SOO. The 2013 SOO is available on the IMO website at www.imowa.com.au/soo and the 2014 SOO, which will include the Reserve Capacity Requirement for the 2016/17 Capacity Year, will be published by 17 June 2014.

The IMO publishes peak demand forecasts based on different PoE levels, that are largely driven by weather conditions.

- 10% PoE represents one-in-10-year demand conditions, being the annual peak demand that would only be expected to be exceeded once in every ten years.
- 50% PoE represents the annual peak demand that would be expected to be exceeded once in every two years.
- 90% PoE represents the annual peak demand that would be expected to be exceeded nine times in every ten years.

The Reserve Capacity Requirement is calculated as the forecast of peak demand in 'one-in-10-year' conditions², plus margins to cover unplanned facility outages and provide frequency stability. Given this stringent requirement, which has been determined following a cost-benefit analysis and is specified in the Market Rules, it is reasonable to expect that some generation and DSM capacity will only be required once every ten years.

The third objective of the WEM is "*to avoid discrimination in that market against particular energy options and technologies*". Consistent with this, the RCM is open to all types of generation plant and DSM capacity, provided that they can meet the timelines set out in the Market Rules and all other requirements of the RCM.

The RCM is built around the concept of a Capacity Credit, a notional unit of capacity that can be traded between Market Participants. Capacity Credits are assigned to individual generation and DSM facilities and are valid for a particular Capacity Year³.

In return for receiving payment for Capacity Credits, there are a number of obligations imposed on holders of Capacity Credits. The most significant obligation is that capacity from a generation or DSM facility must be offered to the system at all times, unless the facility 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 pay Reserve Capacity refunds to the market.

The RCM provides the opportunity for generators to enter contracts to supply their capacity to retailers or other wholesale electricity purchasers. However, as shown in Figure 2, Capacity Credit holders that do not secure bilateral contracts can receive payment for capacity from the IMO, with payments made at an administered price. Also, in the event that the level of expected

² One-in-ten-year demand conditions are a common benchmark in electricity markets when considering reserve margin levels, including the National Electricity Market and major US electricity markets including PJM, New York ISO and New England ISO.

³ A Capacity Year runs from 1 October to the following 1 October.

bilateral trades does not meet the capacity requirement, the IMO may conduct a Reserve Capacity Auction to secure additional supply.

The IMO places obligations on Market Customers to purchase Capacity Credits based on their consumption at system peak times in the previous year. Each Market Customer will be obliged to secure adequate Capacity Credits to meet its Individual Reserve Capacity Requirement (IRCR). Market Customers can either purchase Capacity Credits through bilateral arrangements or through the IMO, as shown in Figure 2 above.

Existing Generation and DSM Capacity

Various measures implemented at the commencement of the WEM, including the RCM, have increased the diversity of Market Participants providing capacity to the SWIS. Figure 4 shows the proportion of capacity by Market Participant for the Capacity Years from 2005/06 to 2015/16. The proportion of capacity provided by the largest provider, Synergy⁴, is projected to reduce from 91% at market commencement to approximately 50% of the total SWIS capacity by 2015/16. The graph also demonstrates growth in the number of Market Participants providing capacity to the SWIS.

Figure 4: Percentage of Capacity Credits by Major Capacity Credit Providers

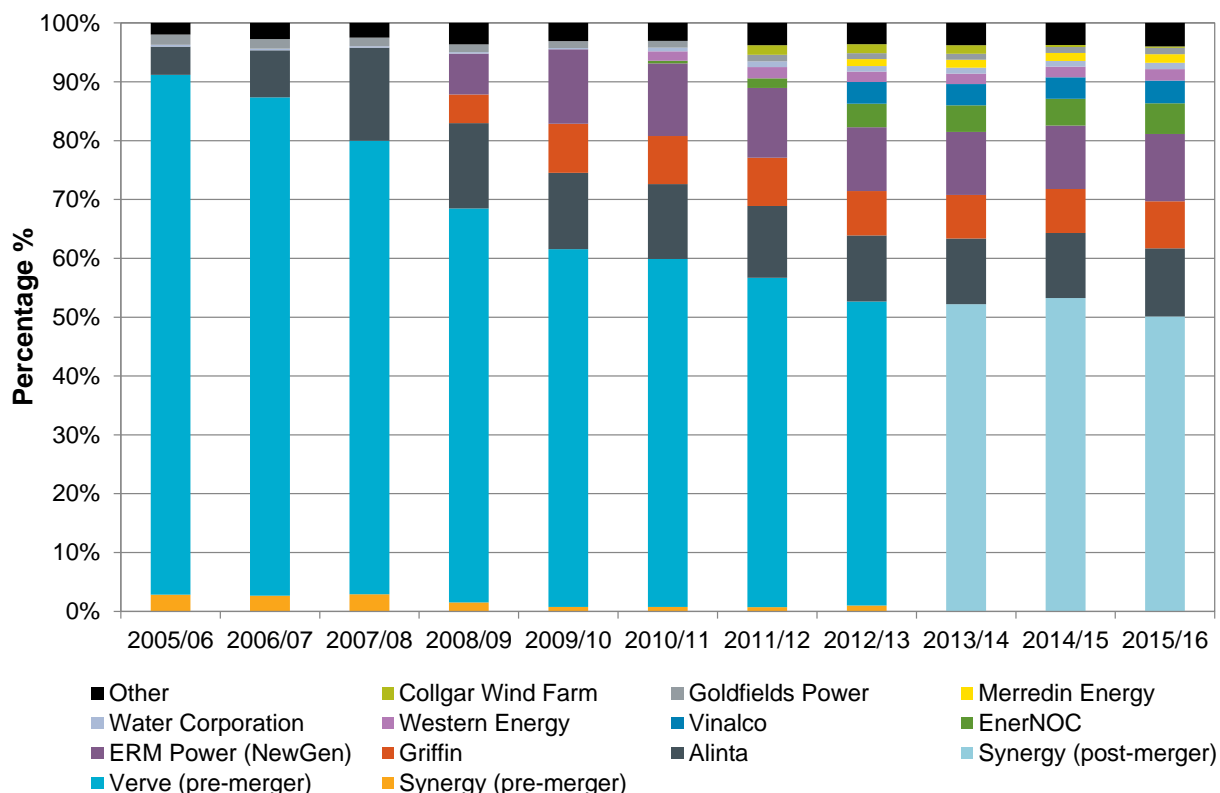


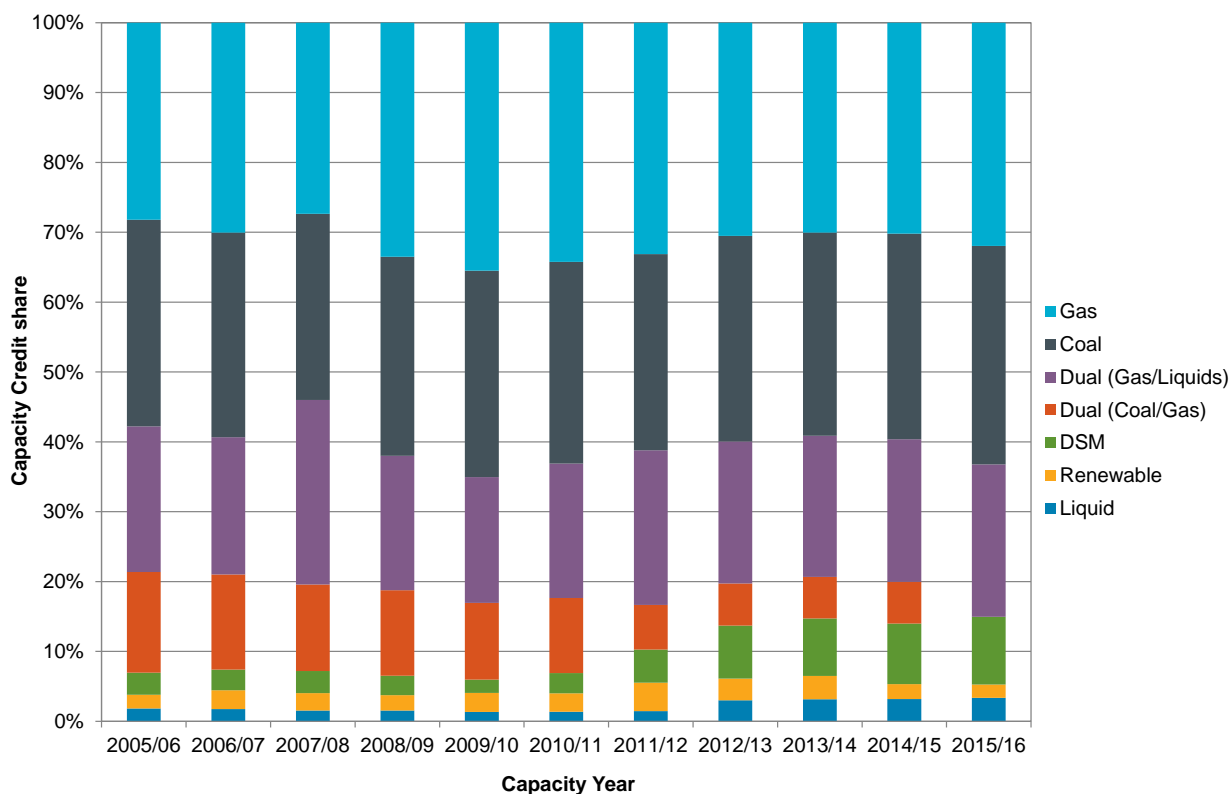
Figure 5 below shows the proportion of capacity by fuel type for Capacity Years from 2005/06 to 2015/16. While there have been some changes to the mix of fuel types, capacity in the WEM

⁴ This includes the generation capacity previously provided by Verve Energy and DSM capacity provided by Synergy. The merger of the two entities became effective on 1 January 2014.

has continued to be diverse since the commencement of the market. Increases in generation have been experienced across each of the fuel types within the SWIS excluding dual coal/gas-fired capacity, which will reduce to zero with the planned retirement of the Kwinana Stage C plant in 2015.

More information on generation and DSM capacity in the SWIS is available in the 2013 SOO.

Figure 5: Proportion of Capacity Credits by fuel type



Future Electricity Demand and Supply-Demand Balance

Since the implementation of the RCM approximately 2,700 MW of new generation and DSM capacity, and a further 200 MW of plant upgrades, have been committed in the SWIS. Over the next two years, the total capacity in the SWIS is expected to decline, largely due to the retirement of Synergy’s Kwinana C facilities in 2015. The Capacity Credits and Reserve Capacity Requirement are shown in Figure 6.

As is shown in Figure 6, the quantity of excess capacity in the WEM has grown since commencement of the market and is estimated to be 11% of the Reserve Capacity Requirement in the 2015/16 Capacity Year. A number of factors have contributed to the consistent increase in excess capacity. These factors include:

- the outcomes of Government policy decisions, such as the Synergy displacement tender, the refurbishment of Muja AB and the solar feed-in tariff;
- new large loads (principally mining loads) not coming online as forecast;

- the cessation of demand growth due to the increases in domestic regulated tariffs (78% for residential customers from March 2009 to July 2013), solar PV uptake and energy efficiency programs; and
- the limited responsiveness of the RCP adjustment to market conditions.

Figure 6: Capacity Credits and Reserve Capacity Requirement

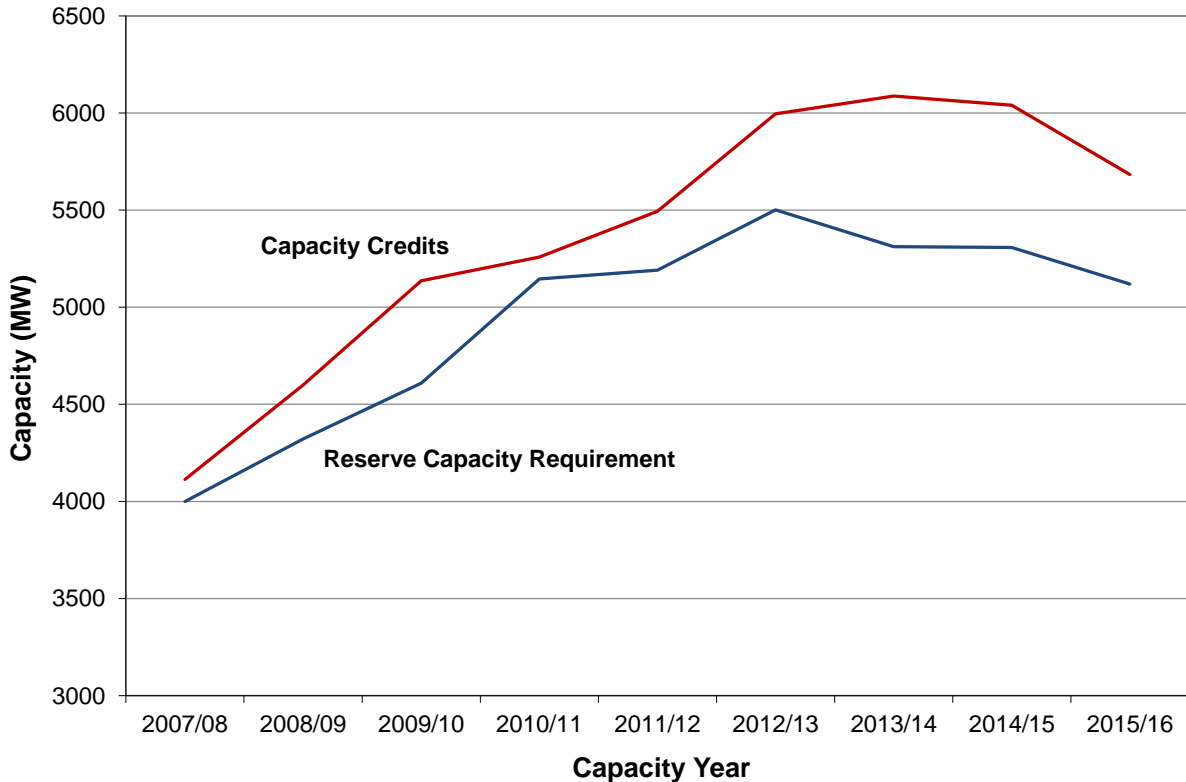


Figure 6 also shows a reduction in the Reserve Capacity Requirement over the last three years. Electricity markets in many developed economies have experienced an unprecedented shift in electricity demand patterns in recent years. As noted above, the cessation of demand growth in the SWIS has been driven by price increases, technological advancement (including solar PV) and behavioural changes.

Accordingly, forecasts published in the 2013 SOO saw reductions in estimates of peak demand and energy consumption in the SWIS from the 2012 SOO. The reductions were driven by a numbers of factors including:

- the curtailment of consumption by some commercial and industrial customers at times of peak demand;
- continuing growth in residential solar PV installations reducing demand for electricity from the grid; and
- lower economic growth projections for Western Australia due to lower projected commodity prices in the medium term.

As was reported in the 2013 SOO and is shown in Figure 7 below, the annual growth in one-in-10-year peak demand forecasts is 2.7% per annum over the next 10 years. Annual electricity demand is forecast to grow at a lower rate of 1.9% per annum on average over the next 10 years. The forecast growth in sent out energy for a range of economic growth scenarios is shown below in Figure 8.

Figure 7: Forecast Maximum Demand – Expected Economic Growth

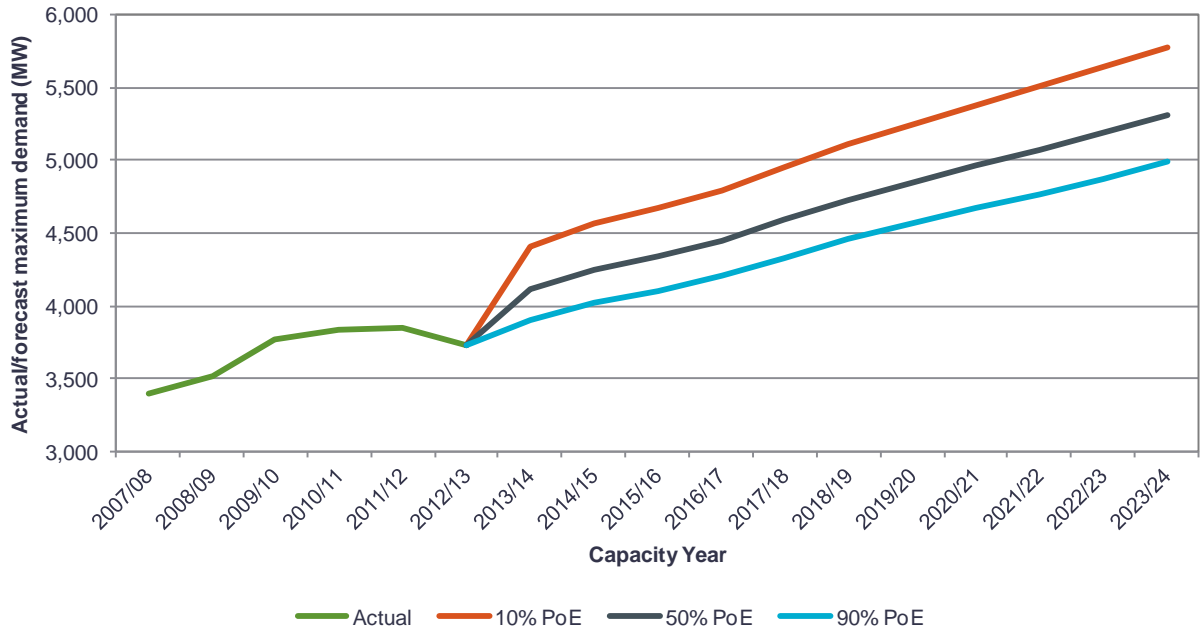


Figure 8: Forecast Sent-Out Energy (GWh)

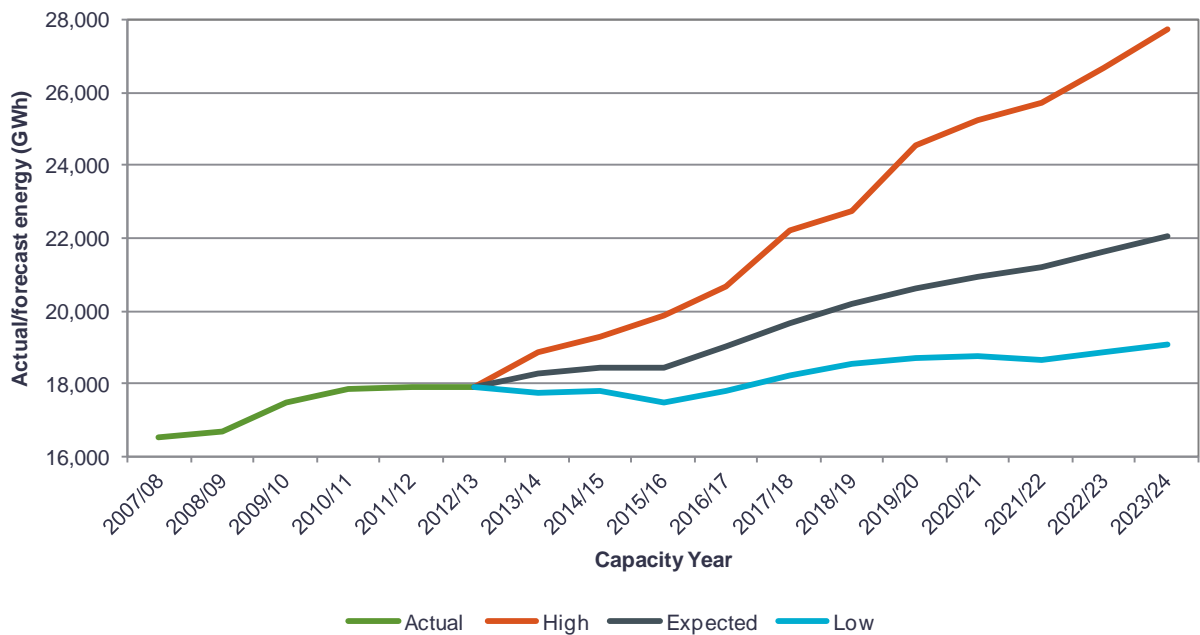


Figure 8 shows a significant difference between the energy forecasts for the Low and High economic growth scenarios. The predicted average annual growth in energy consumption is 0.7% for the Low scenario and 3.9% for the High scenario.

Growth in annual electricity consumption is driven to a large extent by underlying economic drivers. A significant contributing factor is the variation in economic growth forecasts between the Low and High scenarios. Average annual growth in Gross State Product is forecast to be 1.4% in the Low case and 4.1% in the High case.

Preliminary estimates for the 2016/17 Capacity Year are that the Reserve Capacity Requirement will be 5,263 MW⁵. Based on the Capacity Credits assigned for the 2015/16 Capacity Year, approximately 5,673 MW of capacity is expected to be in service for the 2016/17 Capacity Year⁶. This includes 5,122 MW of generating capacity and 551 MW of DSM capacity.

Based on these figures, there is an estimated capacity surplus of 410 MW for the 2016/17 Capacity Year.

Based on previous declarations by Market Participants, the IMO anticipates that all of the 5,673 MW of Reserve Capacity that is expected to be in service in 2016/17 will be provided through Market Participants indicating their intent to trade Certified Reserve Capacity bilaterally.

It is likely that the quantity of excess capacity will differ from the preliminary value presented here due to changes in forecast electricity demand, new generation and DSM capacity being considered by Market Participants, retirement of generation capacity or contraction of DSM capacity⁷.

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 summarised within the 2014 SOO.

⁵ See Table 10 (page 69) of the 2013 SOO.

⁶ This estimate has been calculated from the Capacity Credits assigned to generation and DSM facilities for the 2015/16 Capacity Year minus an estimate of the likely reduction in Capacity Credits for Intermittent Generators due to the transition in the Relevant Level Calculation in Appendix 9 of the Market Rules. This reduction is estimated to be 10 MW. See http://www.imowa.com.au/rules/rule-changes/wem-rule-changes/commenced/rule-change-rc_2010_25 for more information on the transition in this calculation.

⁷ The IMO notes that some contraction of DSM capacity may be possible if Rule Change Proposal RC_2013_10 *Harmonisation of Supply-Side and Demand-Side Capacity Resources* is accepted. This proposal would increase the availability requirements for DSM capacity.

Key Requirements for Certification of Reserve Capacity

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

- the facility will be able to deliver the quantity of megawatts that the Market Participant has applied for; and
- if the facility (or additional capacity at an existing facility) is yet to commence operation, it can provide capacity to the SWIS by the date claimed.

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

The quantity of Certified Reserve Capacity granted to the facility will be the quantity 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.

From Thursday 1 May 2014 through to Tuesday 1 July 2014, a Market Participant may apply to the IMO to have the capacity of its plant certified for the purposes of the RCM. The Market Participant must demonstrate that its facility will be able to deliver capacity into the SWIS throughout the 2016/17 Capacity Year. To be eligible for Certified Reserve Capacity, facilities must be in commercial service by 1 October 2016.

Clauses 4.9 through 4.11 of the Market Rules describe the process for applying for and setting of Certified Reserve Capacity. Further information is provided in the *Market Procedure: Certification of Reserve Capacity*, which is available on the IMO website at <http://www.imowa.com.au/market-procedures>.

The information required to be submitted to the IMO with an application for certification of Reserve Capacity for facilities is listed in clause 4.10.1 of the Market Rules. Further details in relation to registration with the IMO, transmission network access and environmental approvals are provided below. Information that must be provided by the applicant for certification can also be viewed on the IMO website at <http://www.imowa.com.au/crc>.

Registration with the IMO and Facility Creation

To be eligible to apply for Certified Reserve Capacity:

- the proponent must be registered as a Market Participant with the IMO; and
- the facility must have been created in the Wholesale Electricity Market System (WEMS). Facility creation is different from facility registration, as it merely creates a facility name in WEMS and reflects the Market Participant's intention to register a facility in the future.

These processes may be initiated at any time. Satisfying these registration conditions, from the lodgement of an application from WEMS access to the creation of a facility, usually takes 15 to 30 business days. However, this process can take much longer, depending on the complete and timely provision of information and application forms by the proponent. The IMO strongly

encourages project proponents to contact the IMO Market Operations⁸ team as early as possible to ensure they can satisfy these requirements prior to submitting an application for Certified Reserve Capacity.

The Market Participant registration process, including application for WEMS access, is outlined in the *Market Procedure: Rule Participant Registration and De-Registration*. The facility creation process is outlined in the *Market Procedure: Facility Registration, De-Registration and Transfer*. Both procedures are available on the IMO website⁹.

Transmission Network Access

A proponent will be required to provide evidence of an Arrangement for Access or evidence that the Market Participant has accepted an Access Proposal from the relevant Network Operator in respect of the facility. Relevant Western Power documentation includes an Electricity Transfer Access Contract, an Access Offer or a Preliminary Access Offer.

In order for a facility to be assigned Certified Reserve Capacity, this documentation must indicate that the facility will be entitled to have access within the timelines identified in the application for Certification of Reserve Capacity. The documentation must also indicate the level of unconstrained access and details of any constraints, such as runback schemes, that may apply, as required by clause 4.10.1(bA) of the Market Rules. The documentation must have been informed by studies of the ability of the network to accommodate the connection of the facility.

The actual timeframe for a proponent to receive this documentation may vary depending on the project, its location and the existing queue of applicants. In many cases, 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 RCM. 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 RCM.

Environmental Approvals

Clause 4.10.1(c)(ii) 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.

Developers of generation facilities 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 <http://www.epa.wa.gov.au> and proponents are strongly encouraged to read this and to ensure adequate time to complete the required approval processes.

⁸ Contact details are available on the IMO website at <http://www.imowa.com.au/home/contact-us>.

⁹ <http://www.imowa.com.au/rules/imo-wem-procedures-and-other-documents>

Key Steps Following the Certification of Reserve Capacity

Assignment of Capacity Credits

Following the assignment of Certified Reserve Capacity, the IMO assigns Capacity Credits to facilities through a two-stage process. The first stage is the bilateral trade declaration process, where each Market Participant assigned Certified Reserve Capacity declares to the IMO its intent to secure bilateral contracts for trading its Reserve Capacity, or offers its Reserve Capacity into a Reserve Capacity Auction.

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 capacity that is committed or in service, for which the applicant has indicated its intention to bilaterally trade its capacity. 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. No Reserve Capacity Auction has been required since the commencement of the WEM.

Applicants must submit their bilateral trade declarations by Tuesday 2 September 2014. At this stage, Market Participants are only required to declare whether they intend to bilaterally trade their Capacity Credits and are not required to have bilateral contracts in place at the time of this declaration.

Payment for Capacity Credits

Market Participants that are assigned Capacity Credits may receive payments for the Capacity Credits that they hold, either through bilateral contracts or through the IMO.

If it is necessary for the IMO to run a Reserve Capacity Auction, Market Participants who have indicated that they wish to enter the auction are able to offer any price between zero and the Maximum Reserve Capacity Price (MRCP)¹⁰. For the 2016/17 Capacity Year the Maximum Reserve Capacity Price is \$176,800 per MW per year. The Reserve Capacity Auction will be cleared at a single price and this price will apply for all uncontracted Capacity Credits for the 2016/17 Capacity Year. This includes any uncontracted Capacity Credits that have been assigned during the bilateral trade declaration process described above.

If a Reserve Capacity Auction is not held because enough capacity has been secured through bilateral trade nominations (as has been the case for each year since the commencement of the WEM), clause 4.29.1 of the Market Rules sets the price for all uncontracted Capacity Credits according to the following formula:

¹⁰ If Rule Change Proposal RC_2013_20 *Changes to the Reserve Capacity Price and the dynamic Reserve Capacity refund regime* is accepted, offer prices will be required to be between zero and 110% of the Benchmark Reserve Capacity Price.

$$\text{Reserve Capacity Price} = \text{MRCP} \times 85\% \times \frac{\text{Reserve Capacity Requirement}}{\text{Total Capacity Credits assigned}}$$

Proponents should note that this formula will change for the 2016/17 Capacity Year if Rule Change Proposal *RC_2013_20: Changes to the Reserve Capacity Price and the dynamic Reserve Capacity refund regime* is accepted. The proposed change would increase the responsiveness of the RCP adjustment, resulting in better signals for investment in new capacity. More information on the proposed change is available at http://www.imowa.com.au/rules/rule-changes/wem-rule-changes/under-development/rule-change-rc_2013_20.

Table 1 shows the prices for Capacity Credits to 2015/16. The actual price of Capacity Credits for the 2016/17 Capacity Year will depend on whether a surplus is procured through bilateral trades, or if the RCM progresses to a Reserve Capacity Auction.

Table 1: Capacity Credit Prices in the Wholesale Electricity Market

Start Date	End Date	MRCP (\$/MW/yr)	Reserve Capacity Price (\$/MW/yr)	Monthly Reserve Capacity Price (\$/MW/month)
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	\$178,476.69	\$14,873.06
1 Oct 2014	1 Oct 2015	\$163,900	\$122,427.87	\$10,202.32
1 Oct 2015	1 Oct 2016	\$157,000	\$120,199.31	\$10,016.61
1 Oct 2016	1 Oct 2017	\$176,800	TBA	TBA

The Capacity Credit payments will be made in 12 monthly payments equal to the number of Capacity Credits held by the Market Participant multiplied by the Monthly Reserve Capacity Price as described above.

Special Price Arrangements

If a Reserve Capacity Auction is held, new capacity that is cleared in that auction will have the option to accept a Long Term Special Price Arrangement. A Long Term 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 a Reserve Capacity Auction is held, a Market Participant who has been assigned Capacity Credits through the auction must nominate that it wishes to take up the option of the Special

Price Arrangement by no later than Friday 19 September 2014. Special Price Arrangements are only available for new facilities if a Reserve Capacity Auction is held.

Reserve Capacity Security

When a Market Participant seeks assignment of Capacity Credits for a facility that has not yet entered service, will be upgraded or will undergo significant maintenance, it must provide the IMO with a security deposit.

Reserve Capacity Security can be provided in the form of a guarantee, a bank undertaking or a cash deposit and is set at 25% of the Maximum Reserve Capacity Price for each Capacity Credit assigned to the facility.

Reserve Capacity Security is typically provided at the time of:

- the Bilateral Trade Declaration, for capacity that will be traded bilaterally; or
- the submission of offers for the Reserve Capacity Auction, for capacity offered into the auction.

The Reserve Capacity Security is then:

- returned if the facility fails to secure Capacity Credits;
- returned if the facility reaches 100% of the required output level, thus satisfying its capacity obligations;
- returned at the end of the Capacity Year if the facility reaches 90% of the required output level; or
- drawn down upon by the IMO if 90% of the required output level is not reached.

In the event that the IMO draws on a security deposit, this will be used to offset the cost of any Supplementary Reserve Capacity, with the remainder refunded to Market Customers.

Further details on Reserve Capacity Security can be found in clause 4.13 of the Market Rules and in the *Market Procedure: Reserve Capacity Security*.

Obligations on Facilities Receiving Capacity Credits

All facilities that have been assigned Capacity Credits are obliged to make their capacity available to the market at all times. Generation facilities are required to demonstrate this by offering their capacity into the Short Term Energy Market and Balancing Market. Please note that the allocation of Capacity Credits does not guarantee that a facility will be dispatched in the energy market.

Similarly, DSM facilities are required to make their capacity available to the market during the periods specified at the time of certification, in accordance with clause 4.10.1(f) of the Market Rules¹¹.

Apart from approved outage periods, a facility that fails to meet its availability obligation will be required to pay Reserve Capacity refunds to the market. Reserve Capacity refunds are described in section 4.26 of the Market Rules.

Facilities holding Capacity Credits are also required to:

- submit to regular facility tests undertaken by the IMO;
- participate within the centralised outage planning arrangements, where applicable; and
- accept Dispatch Instructions from System Management.

Market Evolution – Potential Changes and Rule Improvements

The IMO strongly advises all prospective capacity providers (either existing or new) to familiarise themselves with recent and upcoming changes to the Market Rules and Market Procedures.

A number of rule changes that are currently under development propose to change elements of the RCM that are described earlier in this document. In particular:

- *RC_2013_10 Harmonisation of Supply_Side and Demand_Side Capacity Resources* proposes to increase the minimum availability requirements for Demand Side Programmes, relax the fuel requirements for Scheduled Generators and require real-time consumption data from Demand Side Programmes.
- *RC_2013_20 Changes to the Reserve Capacity Price and the dynamic Reserve Capacity refunds regime* proposes to amend the formula for calculating the Reserve Capacity Price to make it more responsive to market conditions; and amend the Reserve Capacity refund mechanism to improve its alignment with prevalent system conditions.
- *RC_2013_21 Limit to Early Entry Capacity Payments* proposes to limit the payment of early entry capacity payments (which allow a new facility to begin receiving capacity payments up to four months prior to the start of the Capacity Year) in periods of excess capacity.

For more information on these proposals please refer to the IMO website (<http://www.imowa.com.au/rules/rule-changes/wem-rule-changes/under-development>) or contact the IMO System Capacity team at system.capacity@imowa.com.au.

¹¹ DSM providers should note that the minimum availability requirements for Demand Side Programmes will increase significantly for the 2016/17 Capacity Year if Rule Change Proposal *RC_2013_10: Harmonisation of Supply-Side and Demand-Side Capacity Resources* is accepted. More information on this Rule Change Proposal is available at http://www.imowa.com.au/rules/rule-changes/wem-rule-changes/under-development/rule-change-rc_2013_10.

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 Programme.

The proponent must then submit an Expression of Interest by 5.00 PM (Western Standard Time) on Thursday 1 May 2014, 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 2 of this request. A copy of this form is also provided in Microsoft Excel format on the IMO website (<http://www.imowa.com.au/eoi>).

Proponents who wish to submit an Expression of Interest are advised to read the Important Notice contained in Appendix 1 of this Request.

Expressions of Interest are to be sent to:

Manager, System Capacity
Independent Market Operator
PO 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/market_rules_overview.

Certification of Reserve Capacity

Applications for Certified Reserve Capacity may be lodged with the IMO from Thursday 1 May 2014 until Tuesday 1 July 2014 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 website at <http://www.imowa.com.au/crc>.

Table 2: Timetable for the 2014 Reserve Capacity Cycle

2014 Reserve Capacity Mechanism - Timetable			
Friday	7 February 2014¹²	5.00 PM	IMO publishes Request for Expressions of Interest (EOI)
Thursday	1 May 2014	5.00 PM	Close of EOI
Thursday	15 May 2014	5.00 PM	Announcement of the results of the EOI
Thursday	1 May 2014	9.00 AM	Participants may apply for Certification of Reserve Capacity
Tuesday	17 June 2014	5.00 PM	IMO publishes the: <ul style="list-style-type: none"> • Statement of Opportunities and • Reserve Capacity Information Pack on website
Tuesday	1 July 2014	5.00 PM	Applications for Certification of Reserve Capacity close
Tuesday	19 August 2014	5:00 PM	IMO advises assignment of Certified Reserve Capacity
Tuesday	2 September 2014	5.00 PM	Market Participants: <ul style="list-style-type: none"> • provide Reserve Capacity Security for new capacity that they intend to bilaterally trade • advise how much of their Certified Reserve Capacity will be traded bilaterally and how much will be offered into the auction
Wednesday	3 September 2014	5.00 PM	IMO confirms to Market Participants the amount of Certified Reserve Capacity that can be traded bilaterally
Thursday	4 September 2014	5.00 PM	IMO: <ul style="list-style-type: none"> • publishes the Certified Reserve Capacity for each facility • advises whether the Reserve Capacity Auction is required or cancelled • assigns Capacity Credits (if Reserve Capacity Auction is cancelled)
Friday	5 September 2014	9:00 AM	Lodgement of Reserve Capacity Offers opens (if auction required)
Friday	12 September 2014	5:00 PM	Lodgement of Reserve Capacity Offers closes (if auction required) Market Participants provide Reserve Capacity Security for new capacity entered into the Reserve Capacity Auction
Monday	15 September 2014	5.00 PM	IMO runs the Reserve Capacity Auction and publishes the results (if auction required)
Friday	19 September 2014	5.00 PM	Market Participants advise IMO how many Capacity Credits each facility will provide and of any Long Term Special Price Arrangements to be accepted (if auction required)
Wednesday	24 September 2014	5.00 PM	IMO assigns Capacity Credits (if Reserve Capacity Auction is required) Market Participants may apply to the IMO for a recalculation of the amount of Reserve Capacity Security required to be held for a Facility (applications may be received after this date/time)

¹² The IMO published a notice on 29 January 2014 to extend this deadline from its original date of 31 January 2014.

Appendix 1 Important Notice

1. Purpose

- (a) The purpose of an Expression 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 as at 31 January 2014.
- (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 for Energy, any person acting on behalf of the State of Western Australia, or Minister for Energy, 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 of 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;
- (g) (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 5:00 PM on 1 May 2014, 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 Australian Stock Exchange, 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, Australian Competition and Consumer Commission, 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.

Appendix 2 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)	<input type="checkbox"/> An intermittent generator. <input type="checkbox"/> A non-intermittent generator serving an intermittent load. <input type="checkbox"/> A non-intermittent generator not serving an intermittent load. <input type="checkbox"/> A form of demand side management.
Primary fuel to be used in the facility	
Quantity of primary fuel expected to be available to the facility	
Back-up fuel to be used by the facility	
Quantity of back-up fuel expected to be available to the facility	
Hours during a typical week when the facility will not be available to be dispatched	

FACILITY CAPACITY	
Maximum capacity available (MW)	
For non-intermittent generators: capacity at 41°C (MW)	
For non-intermittent generators serving an intermittent load: maximum capacity required to serve intermittent load (MW)	
For intermittent generators, anticipated Capacity Credit assignment (MW)	

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)	<input type="checkbox"/> Has been made by Western Power Networks. <input type="checkbox"/> Has been applied for and is being processed. <input type="checkbox"/> Has not been applied for.
Environmental approvals: (Please tick the appropriate option)	<input type="checkbox"/> Have been granted. <input type="checkbox"/> Have been applied for and are being processed. <input type="checkbox"/> Have not been applied for.

Appendix 3 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 A1: Capacity Credit Information

	2013/14	2014/15	2015/16
Reserve Capacity Requirement (MW)	5,312	5,308	5,119
Reserve Capacity Auction Requirement	No Auction	No Auction	No Auction
Capacity Credits Acquired by IMO (MW)	6,086.829	6,040.161	5,683.315
Maximum Reserve Capacity Price (\$/MW/yr)	\$240,600.00	\$163,900.00	\$157,000
Reserve Capacity Price (\$/MW/yr)	\$178,476.69	\$122,427.87	\$120,199.31
Monthly Reserve Capacity Price (\$/MW/mth)	\$14,873.06	\$10,202.32	\$10,016.61

Table A2: Availability Curve Data

Availability Curve Information	2013/14 (MW)	2014/15 (MW)	2015/16 (MW)
	(2011 SOO)	(2012 SOO)	(2013 SOO)
Market Rule 4.5.12(a):			
Capacity required for more than 24 Hours	4,390	4,605	4,453
Capacity required for more than 48 Hours	4,280	4,429	4,305
Capacity required for more than 72 Hours	4,202	4,314	4,198
Market Rule 4.5.12(b):			
Minimum Generation Required	4,402	4,438	4,394
Market Rule 4.5.12(c):			
Capacity associated with Availability Class 1	4,402	4,438	4,394
Capacity associated with Availability Class 2	0	0	0
Capacity associated with Availability Class 3	0	167	59
Capacity associated with Availability Class 4	909	703	666

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 2013 Statement of Opportunities Report.

Appendix 4 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.

Availability Curve: A curve developed by the IMO under clause 4.5.10(e) of the Market Rules.

Balancing Market: The mandatory gross pool market operated under Chapter 7A of the Market Rules that determines dispatch of generation facilities based on submitted prices and quantities.

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 1MW of Reserve Capacity. The Capacity Credits to be provided by a Facility are held by the Market Participant registered in respect of that Facility.

Capacity Year: A period of 12 months commencing at 8am on 1 October and ending at 8am on 1 October of the following calendar year.

Certified Reserve Capacity: For a Facility, and in respect of a Reserve Capacity Cycle, is the quantity of Reserve Capacity that the IMO has assigned to the Facility for the Reserve Capacity Cycle in accordance with clause 4.11 or clause 4.28B, as adjusted under these Market Rules including clause 4.14.8. Certified Reserve Capacity assigned to a Facility registered by a Market Participant is held by that Facility.

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: An instruction issued by System Management to a Market Participant, other than Synergy in respect of its Balancing Portfolio, directing that the Market Participant vary the output or consumption of one of its Registered Facilities.

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 *Electricity Industry (Independent Market Operator) Regulations 2004* 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, in accordance with clause 4.28.7 and, if applicable as revised in accordance with clause 4.28.11.

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).

Intermittent Load: A Load that is normally served by an embedded generator.

Long Term Projected Assessment of Supply Adequacy (Long Term PASA): A forecasting study conducted in accordance with clause 4.5 of the Market Rules in order to determine the Reserve Capacity Target for each year in the ten-year forecasting horizon and prepare the Statement of Opportunities Report for a Reserve Capacity Cycle.

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

Market Customer: A Rule Participant registered as a Market Customer under section 2.28 of the Market Rules.

Market Rules: The market rules made under the *Electricity Industry (Wholesale Electricity Market) Regulations 2004* relating to the Wholesale Electricity Market and to the operation of the SWIS.

Minister: The Minister responsible for administering the *Electricity Industry Act*

Network Operator: A person who registers as a Network Operator, in accordance with clause 2.28.2, 2.28.3 or 2.28.4 of the Market Rules.

Power System Adequacy: The ability of the SWIS to supply all demand for electricity in the SWIS at the time, allowing for scheduled and unscheduled outages of generation, transmission and distribution equipment and secondary equipment.

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 under clause 4.19 of the Market Rules.

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 Cycle.

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: For a Market Participant holding Capacity Credits, the obligation to make capacity available to the SWIS, the quantity of which is determined in accordance with clause 4.12.1, clause 4.28B or clause 4.28C of the Market Rules.

Reserve Capacity Requirement: In respect of a Reserve Capacity Cycle, the Reserve Capacity Target for the Capacity Year commencing on 1 October of Year 3 of that Reserve Capacity Cycle.

Reserve Capacity Security: The security to be provided in respect of a new facility, a facility that will re-enter service after significant maintenance or a facility that will be upgraded prior to the assignment of Capacity Credits, as required under section 4.13 or section 4.28C of the Market Rules.

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 Criterion for that Capacity Year determined in accordance with clause 4.5.10(b) of the Market Rules.

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 and is registered as such in accordance with clause 2.29.4(b) and (c) of the Market Rules.

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): Has the meaning given in the Electricity Industry Act.

Special Price Arrangement: An arrangement under clause 4.21 or 4.22 of the Market Rules whereby a Market Participant can secure a price for Reserve Capacity that may differ from the Reserve Capacity Price.

Statement of Opportunities Report: A report prepared in accordance with clause 4.5.13 of the Market Rules presenting the results of the Long Term PASA study, including a statement of required investment if Power System Security and Power System Reliability are to be maintained.

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* (WA).