



INDEPENDENT  
MARKET  
OPERATOR

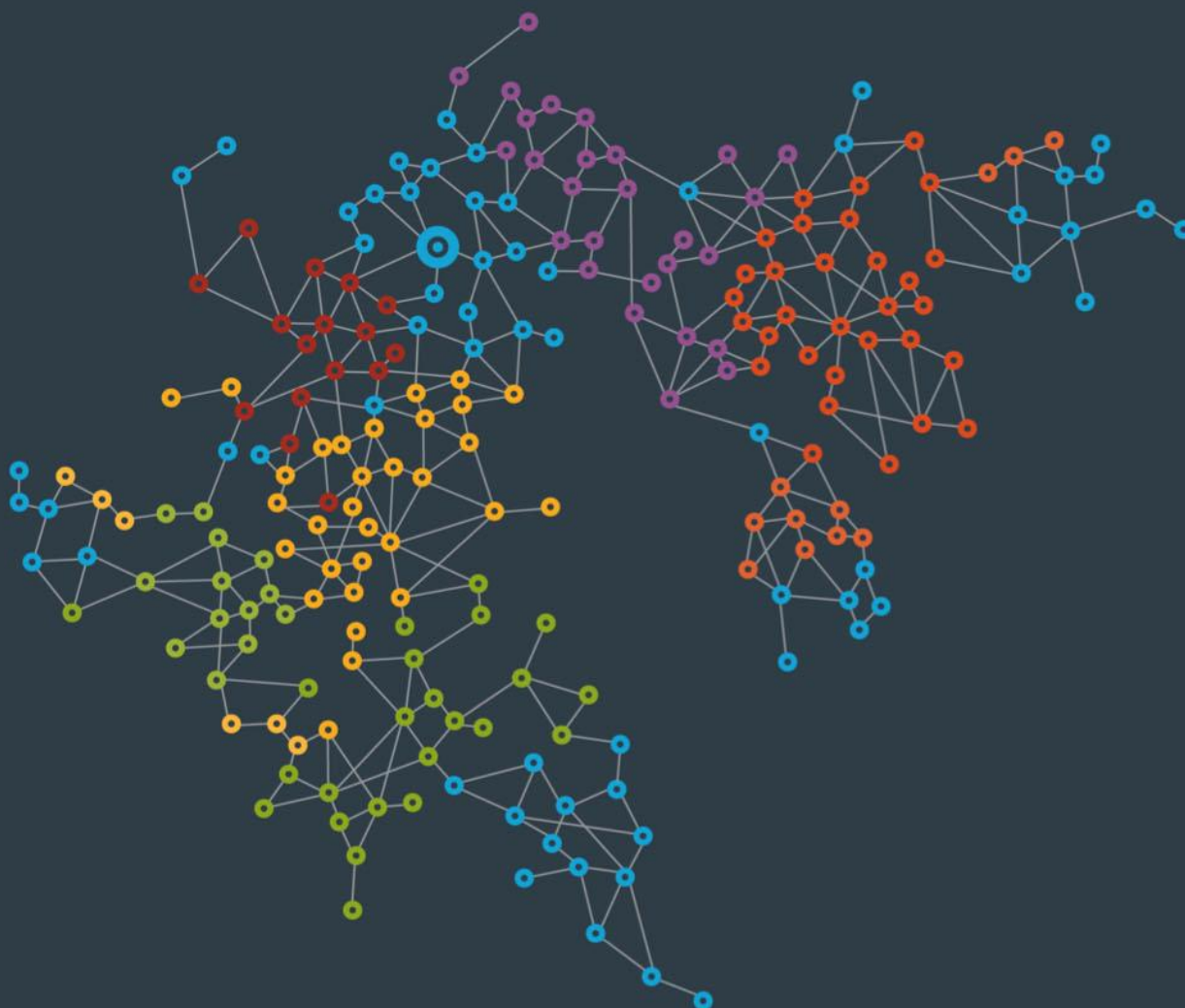
---

# 2014 Relevant Level Methodology Review

## Invitation to Provide Submissions on Draft Report

22 October 2014

---



## TABLE OF CONTENTS

1. Summary of the Review .....	3
2. Invitation for submissions .....	5
3. Invitation for public workshop .....	6

### Document details

Report Title: 2014 Relevant Level Methodology Review - Invitation to Provide Submissions on Draft Report

Release Status: Public

Confidentiality Status: Public domain

### Independent Market Operator

Level 17  
197 St Georges Terrace, Perth WA 6000  
PO Box 7096, Cloisters Square, Perth WA 6850  
Tel. (08) 9254 4300  
Fax. (08) 9254 4399  
Email: [imo@imowa.com.au](mailto:imo@imowa.com.au)  
Website: [www.imowa.com.au](http://www.imowa.com.au)

## 1. Summary of the Review

Under clause 4.11.3C of the Wholesale Electricity Market Rules (Market Rules), the IMO must conduct a review of the Relevant Level Methodology (methodology) every three years. The methodology, which is specified in Appendix 9 of the Market Rules, is used by the IMO to determine the quantity of Certified Reserve Capacity for a Facility, where the Market Participant has applied for certification of the Facility (usually an Intermittent Generator) under clause 4.11.2(b).

The first review, for the three year period commencing on 1 January 2015, is required to be completed by 1 April 2015. Clause 4.11.3C requires the IMO in conducting a review to:

- examine the effectiveness of the methodology in meeting the Wholesale Market Objectives; and
- determine the values of the parameters K and U in step 17 of the methodology to be applied for each of the next three Reserve Capacity Cycles.

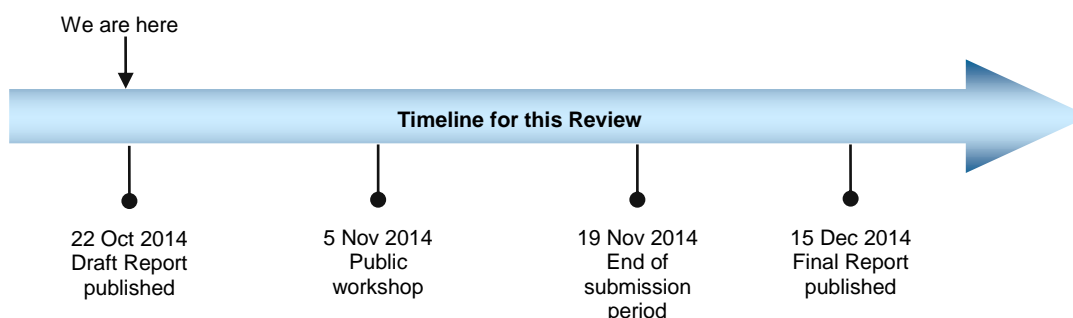
Clause 4.11.3D of the Market Rules requires the IMO to publish a Draft Report for each review and invite submissions from Rule Participants and any other stakeholders the IMO considers should be consulted. At the conclusion of a review the IMO must, under clause 4.11.3E, publish a Final Report containing:

- details of the IMO's review of the methodology;
- a summary of the submissions received during the consultation period;
- the IMO's response to any issues raised in those submissions;
- the values of the parameters K and U determined under clause 4.11.3C; and
- any recommended amendments to the methodology which the IMO intends to progress as a Rule Change Proposal.

The IMO proposes to complete the first review (2014 Review) by December 2014, to allow time for any recommended amendments to the methodology to be progressed through the rule change process in time for certification for the 2015 Reserve Capacity Cycle.

The IMO has engaged Sapere Research Group (Sapere) to assist it with the 2014 Review. Sapere has prepared a Draft Report which is available on the IMO Web Site: [http://www.imowa.com.au/2014\\_RL\\_Methodology\\_Review](http://www.imowa.com.au/2014_RL_Methodology_Review).

The projected timeline for the 2014 Review is:



### Context for the 2014 Review

A major concern raised during the development of the Relevant Level methodology in 2010/11<sup>1</sup> was the lack of available historical data about the likely performance of Intermittent Generators in the South West interconnected system (SWIS) during a ‘one in ten year’ peak demand event. While a one in ten year peak event is yet to occur, the 2014 Review provides an opportunity to consider actual historical data for a further three years, including actual data for:

- the largest wind farm in the SWIS (Collgar); and
- the first solar Facility (Greenough).

In addition, the last three years also provide additional information about the impacts of increasing penetration of rooftop solar photovoltaic (PV) systems in the SWIS, that was not available in 2010/11. The increase in rooftop PV capacity (estimated in the IMO’s 2014 SWIS Electricity Demand Outlook<sup>2</sup> to be around 336 MW) has affected the typical system demand profile for peak demand days, contributing to later and ‘flatter’ peaks.

Actual data for the last three summers has confirmed the high volatility of Intermittent Generator output in the SWIS during high demand/temperature periods. For example, as shown in Figure 1 below the Loss Factor adjusted ‘peak reduction’ provided by the total Intermittent Generator fleet over each summer period (measured as maximum generation output less maximum scheduled generation output) was approximately:

- 218 MW for 2011/12 (based on 3887 MW maximum generation and 3669 MW maximum scheduled generation, both occurring at 4:00pm on 25 January 2012);
- 83 MW for 2012/13 (based on 3763 MW maximum generation and 3680 MW maximum scheduled generation, both occurring at 4:30pm on 12 February 2013); and
- 214 MW for 2013/14 (based on 3703 MW maximum generation at 5:30pm on 20 January 2014 and 3489 MW maximum scheduled generation at 4:30pm on 16 December 2013).

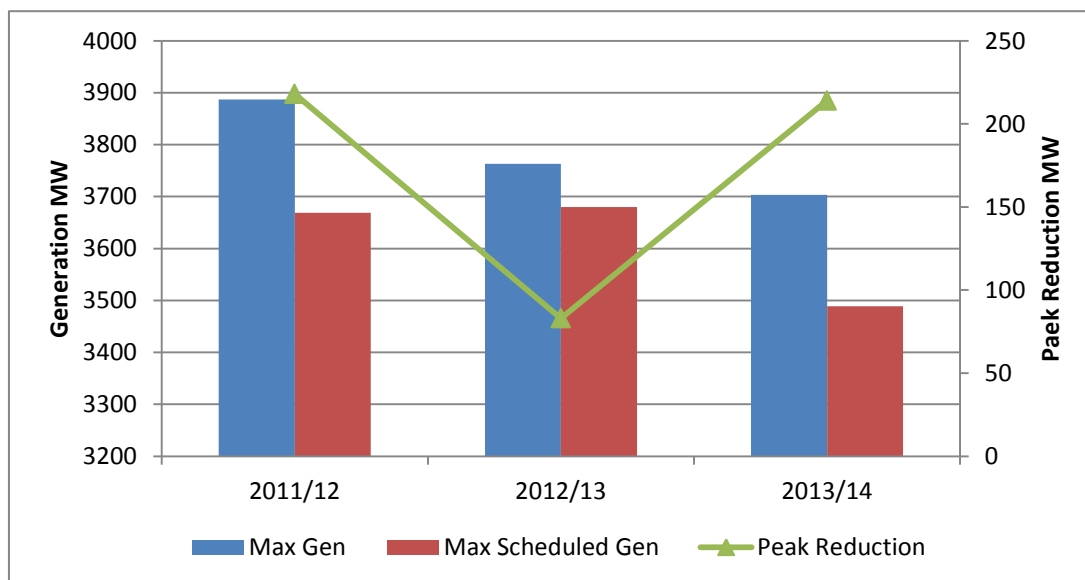


Figure 1: Peak reduction impact of Intermittent Generation for 2011/12, 2012/13 and 2013/14

<sup>1</sup> For further details refer to the Final Rule Change Report for the Rule Change Proposal: Calculation of the Capacity Value of Intermittent Generation – Methodology 1 (IMO) (RC\_2010\_25), available at: [http://www.imowa.com.au/RC\\_2010\\_25](http://www.imowa.com.au/RC_2010_25).

<sup>2</sup> Available at [http://www.imowa.com.au/reserve-capacity/electricity-statement-of-opportunities-\(esoo\)](http://www.imowa.com.au/reserve-capacity/electricity-statement-of-opportunities-(esoo))

None of the maximum daily temperatures<sup>3</sup> for the days listed above were ‘extreme’ by Perth standards – the highest was 40.7 degrees for 12 February 2013. However a maximum daily temperature of 43.4 degrees was recorded on Saturday 11 January 2014. Intermittent Generator output varied over the afternoon of this day between around 63 MW and 145 MW, eventually providing a peak reduction for the day of about 111 MW.

Results can also vary greatly over the consecutive days of an extended ‘heat wave’. For example, Perth experienced a series of very hot days over the period 24-28 January 2012 (Tuesday-Saturday), with maximum daily temperatures of 37.9, 39.5, 41.3, 37.1 and 40.9 degrees recorded. The peak reduction of the Intermittent Generator fleet ranged between 68 MW and 221 MW over these days, as shown in Figure 2 below.

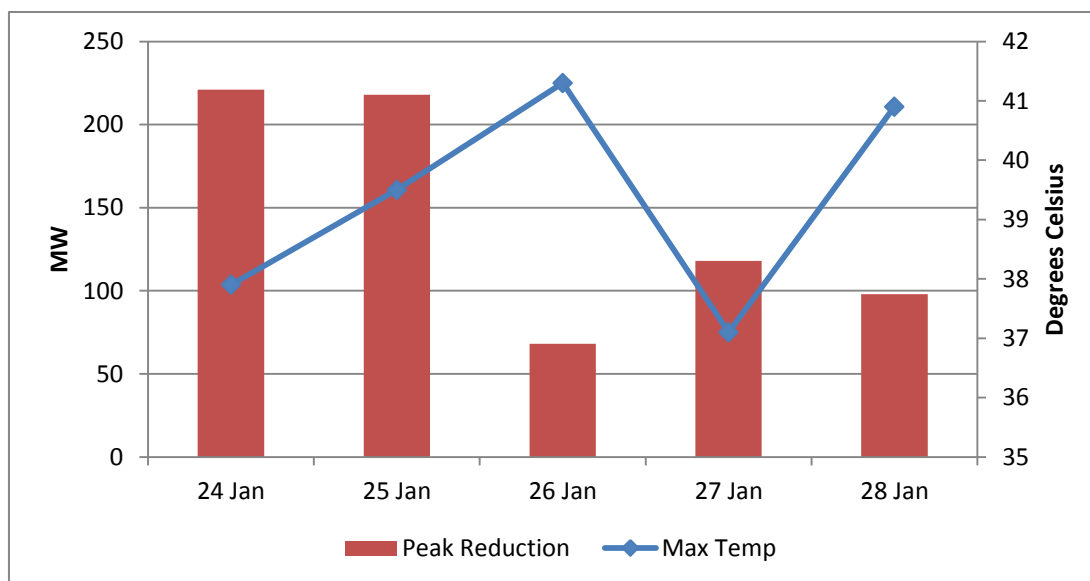


Figure 2: Daily peak reduction of Intermittent Generation for 24-28 January 2012.

### Summary of Draft Report recommendations

Sapere has made the following recommendations in its Draft Report:

- no changes to the Market Rules;
- a reduction in the K parameter value from 0.003 to 0.000; and
- retention of the current U parameter value of 0.635.

## 2. Invitation for submissions

The IMO invites all Rule Participants and any other interested stakeholders to make submissions on the Draft Report prepared by Sapere.

The submission period is four weeks from the publication date of this report. Submissions must be delivered to the IMO by **5:00pm (WST) on Wednesday 19 November 2014**.

Submissions:

- should clearly address any issues that interested parties consider relevant to the 2014

<sup>3</sup> As recorded at Perth Airport by the Bureau of Meteorology.

Review; and

- should provide any supporting evidence or calculations (if appropriate).

### ***Publication of submissions***

Please note that the IMO is required by clause 10.5.1(q) of the Market Rules to make all submissions public. If confidential information is provided in a submission as supporting evidence, it must be clearly marked as confidential. Any confidential information will be excluded when the submission is made public.

### ***How to make a submission***

The IMO prefers to receive submissions by email to [market.development@imowa.com.au](mailto:market.development@imowa.com.au).

Written submissions may also be sent to the IMO by fax or post, addressed to:

Independent Market Operator  
Attn: Group Manager, Development & Capacity  
PO Box 7096  
Cloisters Square, PERTH, WA 6850

Fax: (08) 9254 4399

### ***Contact details***

For any queries about this study, please contact:

Jenny Laidlaw  
Team Leader, Rule Evolution & Reviews  
Phone: 08 9254 4351  
Email: [market.development@imowa.com.au](mailto:market.development@imowa.com.au).

## **3. Invitation for public workshop**

The IMO also invites all interested parties to attend a public workshop on the Draft Report, to be held **2:00pm – 4:00pm (WST) on Wednesday 5 November 2014**.

The objective of the workshop is to discuss the findings of Sapere's review of the Relevant Level Methodology and the recommendations contained the Draft Report. Additional details will be made available prior to the workshop on the IMO Web Site at: [http://www.imowa.com.au/2014\\_RL\\_Methodology\\_Review](http://www.imowa.com.au/2014_RL_Methodology_Review).

If you would like to register for this workshop, please email your name and details to [market.development@imowa.com.au](mailto:market.development@imowa.com.au) with 'Relevant Level Methodology Review Workshop' in the subject header by **5:00pm (WST) on Wednesday 29 October 2014**.