

# Determination of the Ancillary Service Margin\_Peak and Margin\_Off-Peak Parameters for the 2014/15 financial year

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**Economic Regulation Authority**

WESTERN AUSTRALIA

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## Contents

<b>REASONS</b>	<b>1</b>
Background	1
Public Consultation Process	3
Assessment	3
<b>CONCLUSION</b>	<b>5</b>

## DETERMINATION

1. Pursuant to clause 3.13.3A of the *Wholesale Electricity Market Amending Rules (Market Rules)*, the Economic Regulation Authority (**Authority**) has determined the values for the Margin\_Peak and Margin\_Off-Peak parameters, with carbon price, for the 2014/15 financial year to be 14 per cent and 27 per cent, respectively.
2. The Authority determines that if the carbon pricing mechanism is removed through the repeal of the *Clean Energy Act 2011*, the values for the Margin\_Peak and Margin\_Off-Peak parameters will be amended to 15 per cent and 14 per cent, respectively, from the date of the repeal.

## REASONS

### Background

3. The values for the Margin\_Peak and Margin\_Off-Peak parameters are used in the Ancillary Service settlement calculations under clause 9.9.2 of the Market Rules for the compensation of costs incurred by Synergy, as the sole default provider of the Spinning Reserve Ancillary Service. Spinning reserve is reserve that is synchronised to the system that can respond almost immediately and provide frequency or voltage support for a short duration. These parameters reflect the margins applied to the Balancing Price in the settlement calculations of the availability costs to be paid to Synergy for the provision of Spinning Reserve Ancillary Service.
4. Under clause 3.13.3A of the Market Rules, the Authority must determine the values for the Margin\_Peak and Margin\_Off-Peak parameters for each financial year by 31 March, prior to the start of that financial year.
5. In making the determination, the Authority is required to undertake a public consultation process and take into account:
  - the Wholesale Market Objectives; and
  - the proposal submitted by the Independent Market Operator (**IMO**).
6. The Market Rules set out the factors that the IMO must take into account in its proposal for the values of the Margin\_Peak and Margin\_Off-Peak parameters:
  - the margin value Synergy could reasonably have been expected to earn on energy sales foregone due to the supply of Spinning Reserve Service; and
  - the loss in efficiency of Synergy's Registered Generators that System Management has scheduled to provide Spinning Reserve Service that could reasonably be expected due to the scheduling of those reserves.
7. On 28 November 2013, the IMO submitted to the Authority its proposed values for the Margin\_Peak and Margin\_Off-Peak parameters for the 2014/15 financial year, accompanied by a report prepared by its consultant Sinclair Knight Merz (**SKM**). SKM was engaged by the IMO to carry out an independent assessment and modelling of the values for the Margin\_Peak and Margin\_Off-Peak parameters.

8. The IMO's submission is available on the Authority's website.<sup>1</sup> The IMO also provided the Authority with a confidential report prepared by SKM on the key modelling assumptions for the values for the Margin\_Peak and Margin\_Off-Peak parameters.
9. The IMO's proposal assumes that the carbon pricing mechanism will continue to be in effect for the 2014/15 financial year. The carbon price impacts on the short run marginal costs and relative dispatch order of generators. Consequently the Margin Values would change if the carbon pricing mechanism is removed. The Federal Government has indicated its intention to remove the carbon pricing mechanism through the introduction of the *Clean Energy Legislation (Carbon Tax Repeal) Bill 2013*,<sup>2</sup> but it is not clear whether this bill will be passed and hence, remove the carbon pricing mechanism prior to the 2014/15 financial year.
10. Given the uncertainty surrounding the timing of any removal of the carbon pricing mechanism, the Authority requested the IMO to provide calculations of the Margin Values without the carbon price. The Authority has published SKM's final report on 2014/15 Margin Peak and Margin Off-Peak Values – no carbon price on its website.<sup>3</sup>
11. The IMO's proposed values for the Margin\_Peak and Margin\_Off-Peak parameters and other parameters used in deriving these values are summarised in the table below, together with the restated values, assuming the carbon price is repealed.

Parameter	Current 2013/14	Proposed 2014/15	
		Assuming carbon price remains	Assuming carbon price repealed
Margin Off-Peak (%)	27	27	14
Margin Peak (%)	17	14	15
Average Annual Spinning Reserve Capacity_Off-Peak (MW)	197.18	200.03	201.29
Average Annual Spinning Reserve Capacity_Peak (MW)	220.16	221.01	220.48
Estimated Annual Availability Cost (\$M)	7.22	8.93	5.11
System Marginal Price_Off- Peak (\$/MWh)	47.01	48.89	31.10
System Marginal Price_Peak (\$/MWh)	50.81	60.78	45.83

<sup>1</sup> See ERA website, <http://www.erawa.com.au/energy-markets/electricity-markets/determination-of-ancillary-service-parameters>

<sup>2</sup> If the *Clean Energy Legislation (Carbon Tax Repeal) Bill 2013* is passed, it will have the effect of repealing the *Clean Energy Act 2011*.

<sup>3</sup> See ERA website, Determination of Ancillary Service Parameters, <http://www.erawa.com.au/markets/electricity-markets/determination-of-ancillary-service-parameters>

## Public Consultation Process

12. Clause 3.13.3A(b) of the Market Rules requires the Authority, in determining the values for the Margin\_Peak and Margin\_Off-Peak parameters, to undertake a public consultation process, which must include publishing an Issues Paper and issuing an invitation for public submissions.
13. On 5 February 2014, under the Market Rules, the Authority published a notice and an Issues Paper inviting public submissions on the IMO's proposals. The period for public submissions closed on 5 March 2014. No public submissions were received.

## Assessment

14. The Authority has assessed the IMO's proposals against the factors set out in clause 3.13.3A of the Market Rules by taking into account:
  - the Wholesale Market Objectives;
  - whether the proposed values by the IMO reflect what Synergy could reasonably have been expected to earn on energy sales forgone due to the requirement to supply Spinning Reserve Ancillary Services; and the generation efficiency losses that could reasonably be expected to be incurred by Synergy as a consequence of providing Spinning Reserve Ancillary Services; and
  - issues raised in the public submissions.
15. The Authority has considered whether the proposed values for the Margin\_Peak and Margin\_Off-Peak parameters are consistent with the Wholesale Market Objectives. The Authority notes that the calculations of the values for the Margin\_Peak and Margin\_Off-Peak parameters are based on Synergy's facilities solely providing Spinning Reserve Ancillary Services. Although it reflects the current arrangements in the Wholesale Electricity Market, it may not produce an efficient outcome for the market as a whole.
16. The Authority is of the view that there is no strong reason to retain Synergy as the sole provider for Spinning Reserve Ancillary Services. The Authority understands that the structure used for introducing a competitive market for Load Following Ancillary Service could be extended to the provision of Spinning Reserve Ancillary Service.
17. The Authority considers introduction of a competitive market for Spinning Reserve Ancillary Service would promote the Wholesale Market Objective under clause 1.2.1(b).<sup>4</sup> The Authority notes that introducing a Spinning Reserve Ancillary Services market is part of the IMO's Market Rules Evolution Plan: 2013-2016,<sup>5</sup> and that it is ranked number four in the order of priority.
18. The Authority notes that the methodology used to derive the values for the Margin\_Peak and Margin\_Off-Peak parameters is consistent with the methodology

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<sup>4</sup> The Wholesale Market Objective under clause 1.2.1(b) is to encourage competition among generators and retailers in the South West Interconnected System, including by facilitating efficient entry of new competitors.

<sup>5</sup> Market Rules Evolution Plan: 2013-2016, November 2012, [http://www.imowa.com.au/docs/default-source/rules/market\\_rules\\_evolution\\_plan\\_2013-2016\\_final.pdf?sfvrsn=2](http://www.imowa.com.au/docs/default-source/rules/market_rules_evolution_plan_2013-2016_final.pdf?sfvrsn=2)

used in the previous year. The Authority notes that the IMO undertook the following measures to improve the quality of the input assumptions:

- In preparation for the review, SKM undertook an analysis to compare modelled outcomes from the 2011 review against actual market outcomes for the 2012/13 Financial Year. The IMO noted that in general there was close alignment between modelled and actual dispatch and pricing outcomes, with most of the differences attributable to variations between forecast and actual load. However, the IMO noted that, based on the analysis results, adjustments were made to various modelling assumptions including start-up costs, outage rates, gas prices, output limits, assumptions around steam production, and the “must run”<sup>6</sup> status of some units.
  - System Management reviewed SKM’s modelling and network topography assumptions used in the study, and provided updated load profiles by region.
  - A public version of the draft Assumptions Report,<sup>7</sup> which excluded confidential Market Generator details, was published by the IMO on 11 September 2013. The IMO invited interested stakeholders to either request a meeting to consult directly with the IMO and SKM or to provide written submissions on the report. No requests for direct consultation were received during the formal consultation period, which closed on 25 September 2013. Community Electricity provided the only submission. The IMO and SKM’s response to the points raised in Community Electricity’s submission is available in SKM’s Final Report.
  - The IMO requested feedback from nine large Market Generators on full extracts of the key assumptions for their facilities. The IMO received feedback from six Market Generators, four suggesting changes to their facility assumptions.
19. The Authority has reviewed the analysis undertaken by SKM and is satisfied that the adjustments made to the modelling assumptions for the 2014/15 financial year are appropriate and provide a reasonable approximation of actual market outcomes.
  20. The Authority has reviewed the costing assumptions and is satisfied that these are reasonable.
  21. The Authority notes that the proposed Margin\_Off-Peak (assuming the carbon price remains in place) is unchanged from the current level and the proposed Margin\_Peak has reduced from 17 per cent to 14 per cent. The forecast level of Spinning Reserve required is very similar to previous years. The forecast off-peak marginal price is forecast to rise very slightly (from \$47.01/MWh to \$48.89/MWh), whereas the forecast peak marginal price is significantly higher than the level forecast by SKM at the last review (\$60.78/MWh compared with \$50.81/MWh). SKM notes that the increase in marginal peak price is driven by a combination of factors including changes to assumptions on unit availability, increases in carbon prices, increases in the marginal costs assumed for some units, and constraints on cogeneration in excess of the host demand for steam.
  22. The Authority notes that the forecast marginal peak price for the 2014/15 financial year of \$60.78/MWh is comparable to the actual time weighted average peak price for the 2012/13 financial year of \$58.65/MWh.

<sup>6</sup> “Must run” refers to a generator that is preferred to remain running under all circumstances. This may include generators co-located with, and providing steam to, an industrial plant.

<sup>7</sup> 10 September 2013, 2014/15 Margin Peak and Margin Off-Peak review assumptions report – public, [http://www.imowa.com.au/docs/default-source/rules/imo-wem-procedures-and-other-documents/sh43499\\_assumptions\\_report-\\_v7\\_0-1\\_public.pdf?sfvrsn=0](http://www.imowa.com.au/docs/default-source/rules/imo-wem-procedures-and-other-documents/sh43499_assumptions_report-_v7_0-1_public.pdf?sfvrsn=0)

23. The reduction in the Margin\_Peak is mainly due to an increase in the forecast marginal peak price.
24. As would be expected, the cost of providing Spinning Reserve would reduce if the carbon price is removed. SKM notes this reduction is proportionally greater in the off-peak periods when less efficient coal units are generally the marginal plant. This, in turn, reduces the profit forgone by Synergy due to the provision of Spinning Reserve. In addition, SKM notes there is a smaller increase in generation cost, largely due to a reduction in start-up costs for Synergy units in the simulations when Spinning Reserve is modelled.
25. SKM's report notes that, as in previous years, the proposed margin values have been developed assuming that no Ancillary Service Contracts for Spinning Reserve (apart from the existing contracts for Interruptible Load) are negotiated for the 2014/15 financial year. The Authority is aware that System Management has sought interest from Market Participants to provide 26MW of Spinning Reserve services to displace Spinning Reserve currently provided by Synergy. However, as offers were required to be made in the form of a discount to the administered price, the Authority does not consider this would have a material impact on the modelling undertaken by SKM. If a new contract is entered into with a third party, the total amount paid to Synergy will be less than the amount forecast by SKM's modelling and instead be paid to the third party (at a discounted value).
26. The Authority notes that SKM has included 50% of the fixed cost component of the gas transport charge in the marginal costs for gas-fired generators in its modelling. The Authority notes that SKM has adopted this approach since its review of the values of the Margin\_Peak and Margin\_Off-Peak parameters for the 2012/13 financial year, and has since continued with this approach.
27. It is not clear to the Authority why any element of the fixed cost has been included in formulating the marginal cost for gas-fired generators. The Authority notes that the analysis undertaken by SKM to compare modelled outcomes against actual market outcomes for the 2012/13 financial year has not identified this as an issue. It has also not been raised as an issue during public consultations. The Authority recommends that the IMO examine this matter as part of the next review of the values for the Margin\_Peak and Margin\_Off-Peak parameters.
28. The Authority is satisfied that in proposing the values for the Margin\_Peak and Margin\_Off-Peak parameters, with and without carbon price, the IMO has taken into account:
  - the margin value Synergy could reasonably have been expected to earn on energy sales foregone due to the supply of Spinning Reserve Service; and
  - the loss in efficiency of Synergy's Registered Generators, that System Management has scheduled to provide Spinning Reserve Service, that could reasonably be expected due to the scheduling of those reserves.

## CONCLUSION

29. Based on the assessment provided above, the Authority determines that the values for the Margin\_Peak and Margin\_Off-Peak parameters, with carbon price, for the 2014/15 financial year are 14 per cent and 27 per cent, respectively.

30. The Authority determines that if the carbon pricing mechanism is removed through the repeal of the *Clean Energy Act 2011*, the values for the Margin\_Peak and Margin\_Off-Peak parameters will be amended to 15 per cent and 14 per cent, respectively, from the date of the repeal.