INDEPENDENT MARKET OPERATOR

Wholesale Electricity Market
Rule Change Submission Form

RC_2013_20 Changes to the Reserve Capacity Price and dynamic Reserve Capacity refund regime

Submitted by

Name:	Fiona Edmonds
Phone:	08 9486 3009
Fax:	08 9226 4688
Email:	fiona.edmonds@alintaenergy.com.au
Organisation:	Alinta Energy
Address:	Level 13, 1 William Street, Perth WA 6000 Australia
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Submission

1. Please provide your views on the proposal, including any objections or suggested revisions.

Background

In 2011 the IMO Board engaged The Lantau Group to conduct a comprehensive review of the design and performance of the Reserve Capacity Mechanism (RCM). The review concluded that while the RCM had promoted capacity development and reliability in the Wholesale Electricity Market (WEM), refinements were required to improve its responsiveness to changing market conditions.

To consider those issues raised, and recommendations made, by the Lantau Group, the IMO constituted the RCM Working Group (RCMWG) in early 2012.

RCMWG's deliberations

The RCMWG explored the following four major work streams relating to the WEM Rules:

- Adjustments to the Reserve Capacity Price (RCP);
- The obligations of Demand Side Programmes and the harmonisation with supply-side capacity resources (*being progressed via RC_2013_10*);
- A dynamic Reserve Capacity refund regime; and

- The calculation of Individual Reserve Capacity Requirements (*progressed via RC_2013_11*).

Discussions with respect to the RCP focussed on the perceived issues associated with the lack of responsiveness of the existing RCP formula to changing market conditions. This was considered to lead to inefficient signals for investment in the WEM.

Likewise, those discussions with respect to the existing framework for determining capacity refunds focussed on the current lack of alignment between the refund values and actual market conditions. This was considered to lead to inappropriate incentives to capacity providers to present capacity to the market during times of greatest need.

The Lantau Group was engaged by the IMO to recommend solutions to these two particular issues. As the RCP and refund regime signal the attractiveness of investment in the WEM, the IMO determined to progress the recommendations from these two streams of work as a comprehensive package so as to avoid any unintentional perverse outcomes.

Proposed changes

Based on the Lantau Group's recommendations, the IMO proposes the following suite of changes relating to the RCP and refund regime:

Capacity Price

- Adjustment to the RCP formula (Issue 1) as follows:
    - Enable the RCP to move to 110% of the Maximum RCP (MRCP) when 97% of the Reserve Capacity Requirement (RCR) has been fulfilled; and
    - Steepen the slope function embedded in the excess capacity adjustment to -3.75 (currently -1) to enable the rate of downward adjustment to accelerate as excess capacity rises;
- Adjustment to set ceiling price in auction to 110% of MRCP (Issue 2);
- Renaming MRCP to Benchmark RCP to better reflect the fact that the MRCP signals the expected rather than maximum price for providing capacity (Issue 3);

Capacity refund regime

- Adjustment to the refund table such that the refund factor in a Trading Interval is calculated using a formula and equal to the lesser of:
    - Six; and
    - The greater of the dynamic refund factor (calculated based on spared capacity) and floor refund factor (calculated based on available capacity for dispatch which is based on the capacity for the Facility that was on Forced Outage during the previous 90-day rolling period).
- Replacement of the concept of off-peak and peak trading interval rates (currently reflected in the refund table) with the concept of an Interval Refund Rate (determined as the product of the applicable refund factor in the relevant Trading Interval and applicable Monthly RCP).
- Align the magnitude of refunds for generators and DSM;

- Recycle capacity refunds to generators rather than customers based on their eligibility (i.e. that they have generated a non-zero MW value in any one Trading Interval during the previous 30-day period).

Alinta's views

The identified increase in the oversupply of capacity from 2012/13 to 2013/14 was most likely due to a downward revision in the IMO's forecast RCR for that year rather than the entry of new capacity[1]. It is also important to keep in mind that there have been a number of additional drivers for the entry of new capacity other than the high MRCP that occurred between 2012/13 to 2013/14, including the displacement mechanism, commercial decision making and government policy. That is the RCP alone has not resulted in the current oversupply of capacity. That said, Alinta agrees that it is important to identify options for ensuring an excessive oversupply of capacity does not occur now or in the future.

However, Alinta does not consider it is desirable at this time to contemplate increasing the rate at which the RCP declines when available capacity exceeds the RCR for the following reasons:

- The State Government will be shortly undertaking a review of the design and functions of the WEM which is expected to include a review of a design of the capacity mechanism. It is preferable that issues such as the responsiveness of the capacity mechanism to market conditions are considered as part of this more holistic review of the market design. This will ensure that alternative directions for the markets development are not taken in quick succession given the associated implementation costs and investment uncertainty this would create. On this basis Alinta recommends that the progression of this rule change should be postponed until after the findings of the State Governments review are published.

- Adjusting the RCP is only one of a number of alternative mechanisms that can be potentially introduced to ensure that the signals for the entry of new capacity are better aligned to the market's needs. While the Lantau Group considered alternative options such as introducing a restriction on the quantity of capacity that is procured in each year, Alinta does not consider that the market has adequately contemplated the multitude of potential alternative design options available to it. As referred to above, it is expected that the broader WEM review will undertake a more fundamental consideration of these points.

- The proposed amendments will introduce significant potential pricing volatility and investment uncertainty for those facilities which choose to not bilaterally contract their capacity. Alinta acknowledges that the design of the capacity mechanism is based on the assumption that the majority of capacity is bilaterally contracted.

- A number of the aspects of the proposed RCP formula, including adjusting the slope function from -1 to -3.75 and the ability for the RCP to reach 110% of the MRCP when 97% of the RCR has been fulfilled, appear to have been arbitrarily determined based on the Lantau Group's "gut instinct".

[1] Due to a number of drivers including shortcomings in the demand trend forecasting used by the IMO, unanticipated uptake of PV systems, improvements in energy efficiency and several large block loads not eventuating .

- It would be preferable to consider how the RCR is set for each Capacity Year in conjunction with considering how the RCP is determined. Alinta considers that these two mechanisms are intricately linked[2] and so more analysis of the interrelationship between the two mechanisms is required. While it may not be necessary to set these two values as part of the same process, refinements to how the RCR is set may deliver better market outcomes than the proposed amendments to the RCP. This needs to be explored further by the market.

Likewise, Alinta does not support the introduction of a dynamic capacity mechanism due to the overlap of the proposal with the upcoming broader review of the capacity mechanism as part of the WEM review (refer above) and because the changes will result in:

- further uncertainty for participants with respect to their refund exposure at any specific time;

- changes to the incentives for providing energy at various times of the year as a result of the dynamic nature of the proposed mechanism changing the risks associated with refund exposure; and

- potential inefficiencies being introduced into the outage planning process as a consequence of the incentives for providing energy at various times of the year changing.

Alinta's specific comments on the proposed changes are presented below.

Issue 1 – Changes to the RCP formula

The Lantau Group[3] notes the following rationale for setting a number of the aspects of the proposed RCP formula:

- Slope function of -3.75: developed to yield a point of equivalence at a given level of excess Reserve Capacity between the current RCP formula and the modified formula. It is a value selected to minimise the need for a transition given the already material changes implemented with respect to the MRCP formula.

- 97% factor: reflective of the observation that there exists an approximately 3% forecast error band with respect to demand forecasts made two years forward.

- Enabling the RCP to go above the MRCP (i.e. to 100% of the MRCP): ensures that it is more certain that capacity resources can be economically developed should a shortage situation arise.

As noted above Alinta considers that these values have been largely determined based on the judgment of the Lantau Group. There appears to be little exact science to support the proposition that the proposed amended RCP formula will result in the right market outcome in all circumstances. While the evidence presented to date suggests that the new formula will provide a sharper price signal to the market than the current formula it is unclear that what is

[2] For example a change in the RCR forecast due to a forecasting error will, all else held equal, result in a change in the RCP.
[3] Refer to the Memo provided to the RCM Working Group on 22 February 2013 available via the following link: http://www.imowa.com.au/docs/default-source/Governance/Market-Advisory-Committee/MAC-Working-Groups/combined_rcmwg_mtg_10_papers.pdf?sfvrsn=2

proposed is the “best” outcome for the market. Likewise there seems to have been little consideration of the side effects associated with greater price volatility that the amendments will potentially introduce into the market.

Alinta is also concerned that there has been no stated reason for setting some of the parameters of the proposed formula at a particular level. For example there appears to be no stated rationale as to why the RCP should be able to go to 110% of the MRCP as opposed to say 120%. Likewise it is unclear why a price floor has not been incorporated into the formula.

As noted above we do not support the progression of the proposed changes to the RCP formula. In particular, Alinta does not support the introduction of regulatory changes simply on the basis of a consultants “gut instinct”. However if the IMO determines to continue to progress the proposed changes a price floor should be incorporated into the proposed formula. This will ensure symmetry with the inclusion of a price ceiling and provide greater certainty to investors as to the minimum price their investment may receive from Capacity Credits if traded through the IMO.

Issue 2- The applicable ceiling price in a Reserve Capacity Auction

It is unclear from the proposal why the IMO considers that it is appropriate for the applicable ceiling price in a Reserve Capacity Auction to be set at 110% of the MRCP. While Alinta appreciates that this will ensure consistency with the proposed changes to the RCP formula, to date no other evidence as to why this is an appropriate for the purposes of capping the auction price has been presented to industry for its consideration.

Further details of Alinta’s concerns with respect to the lack of assessment of this proposed change against the Market Objectives is provided below.

Issue 3 – Renaming the Maximum RCP to the Benchmark RCP

Alinta perceives no issues with the IMO’s proposal to rename the Maximum RCP to be the Benchmark RCP.

Issue 4 – Dynamic Reserve Capacity refund factors

Alinta does not support the introduction of dynamic refund mechanism on the basis that it creates greater uncertainty as to the refund rate that will apply at any time. Further details of Alinta’s views on the proposed dynamic refund mechanism are outlined below:

- Under the dynamic refund mechanism it is not possible to be 100% certain of the amount of spare capacity in the market in advance. While Alinta notes that the IMO is still considering when exactly to publish details of the spare capacity in the market, regardless of the timing for publishing this information there will never be complete certainty as to a generators exposure at any one time. That is, even if information is published ex-ante this may invoke a response from a participant which then renders the previous information out of date. For example a participant that has exceeded its allowed level of Planned Outages may determine to schedule outages (which for all intents and purposes will be treated as Forced Outages) during periods when there are high levels of spare capacity so as to minimise its exposure to refunds.

The current capacity refund mechanism provides complete certainty to generators as to their exposure to refunds in any one trading interval making it easy to account for in decision making. Under the proposed dynamic refund mechanism it is not possible to be certain of the amount of spare capacity in the market in advance and therefore the exact exposure of a generator is uncertain. That is the dynamic refund mechanism will change the risk profile for generation assets.

- The proposed dynamic refund regime is highly likely to result in maximum exposure to refunds occurring during shoulder periods when generation is on Planned Outage. Under the current market design if a large amount of generation is on outage in winter there are significant incentives for other generation to operate as there are likely to be high energy prices and low refund risk. Under the proposed mechanism while there may be high energy prices there is also likely to be high refund risk. This will potentially impact on some generators decision making.

- The proposed inflection points for the maximum refund factor (750MW) and minimum refund factor (1500MW) are based off the minimum reserve generally used by System Management in its outage planning processes. Alinta queries whether it is possible that the appropriateness of these values could change over time (i.e. if System Management may determine to use alternative values if there is a change in industry composition in the future) and whether it would be necessary to adjust for this in the calculation of dynamic refunds.

  Assuming that updates to the inflection points would be appropriate:

  - If it is expected that the appropriateness of these values will differ very little over time then it would be appropriate for the IMO to simply facilitate a rule change if necessary in the future to update these values where they become significantly out of line with the values applied by System Management. A simple mechanism for formally monitoring the appropriateness of the values may also need to be developed; or

  - If the appropriateness of these values will differ significantly year on year than it would be appropriate to incorporate a formal review and update process into either the Market Rules or a relevant Market Procedure.

Issue 5 – The applicable refund rate for DSPs

Alinta considers that the IMO's proposal to ensure DSM is exposed to the same level of refunds as a generator is a sensible step towards ensuring true harmonisation of demand and supply side resources.

Issue 6 – Recycling of Capacity Cost Refund Revenue

Alinta generally supports the IMO's proposal to recycle capacity refunds to available generators so as to encourage greater levels of availability. Alinta however provides the following observations regarding the proposed changes:

- The requirement for a facility to have generated electricity during any one Trading Interval in the past 30-day period will create an incentive for some peaking generation to run at non-peak times so as to be entitled to refunds. This will be a commercial

decision for generators based on whether they consider the likely capacity refund income will be greater than the costs that they incur in ensuring a non-zero level of generation occur during the relevant time period. It's unclear what potential impact this behaviour will have on the overall efficiency of the mix of generation running in the WEM, i.e. suboptimal outcomes may occur as a consequence of peakers bidding themselves into the market at low prices to ensure dispatch can occur.

Alinta recommends that the IMO adjusts the eligibility criteria to be simply based on the availability of the generator during the past 30 days, i.e. removes the requirement to have produced energy in at least one trading interval.

- The IMO has stated that Intermittent Generators will be excluded from the refund pool as once these facilities are in Commercial Operation and have operated at their Required Level they are not liable for refunds. This approach represents a simplistic market design solution that will reflect the status of the majority of Intermittent Generators in the WEM. The occasions where there will be an Intermittent Generator that is subject to refunds (i.e. when they are entering the market and commissioning their plant) should be minimal in the market. On this basis Alinta supports the IMO's proposed approach.

General comments

Alinta notes its general concern that the proposed changes to address Issues 2, 3 and 5 have not been reflected in the IMO's Market Objective Assessment, as presented in its Rule Change Proposal. Alinta considers it is good regulatory practice to ensure each proposed change is assessed against the objectives and presented to industry.

Alinta also notes the IMO's view that there is likely to be a "net economic benefit over time". However given that the IMO has identified it will incur significant costs to build and test the proposed changes to the settlement systems, Alinta considers that a cost-benefit assessment of each of the proposed changes should be conducted and taken into consideration when making the IMO's draft decision on the proposed amendments. In considering the costs/benefits of the changes to the RCP formula the IMO needs to take into account the impacts of the current excess capacity adjustment which results in a dilution of the capacity price paid to generators rather than impacting directly on customers (as is implied by the IMO in its proposal – refer to page 5). Alinta suggests that the IMO refers to the original proposal put forward by Synergy which sought to address this issue by introducing the excess capacity adjustment.

Finally, the proposed changes will introduce significant complexity into settlements for the WEM. It's unclear how the proposed changes are consistent with the IMO's broader intentions to simplify settlements. Introducing greater complexity into the market design is also likely to create additional barriers to entry.

If you require any further clarification of the matters raised in this submission please directly contact Fiona Edmonds, Wholesale Regulation Manager.