
Wholesale Electricity Market Rule Change Submission Form

RC_2013_10 Harmonisation of Supply-Side and Demand-Side Capacity Resources

Submitted by

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Date submitted:	3 October 2013

Submission

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

Background

There have been concerns raised within industry and government for a number of years around the fact that despite providing the same role in meeting peak demand requirements and being rewarded similarly, capacity resources are not always treated consistently in the Wholesale Electricity Market (WEM).

Consistent with these views the recent review of the Reserve Capacity Mechanism (RCM) by the Lantau Group identified a number of issues with the existing performance requirements for Reserve Capacity including:

- The role of Demand Side Management (DSM) in the RCM* – The Lantau Group suggested harmonising the treatment of demand-side and supply-side (generation resources) by increasing the minimum availability requirement for Demand Side Programmes (DSP).
- The fuel requirements imposed on generation capacity providers* – The Lantau Group suggests refinement of the fuel supply requirement.

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

To assist in the RCMWG's deliberations on those recommendations relating to the harmonisation of capacity resources (Work Stream 2), the IMO engaged Dr Richard Tooth from the Sapere Research Group.

Dr Tooth provided the following high level observations which consequently formed the basis of the proposed changes put forward to the RCMWG's consideration:

- Fuel Requirements (Issue 1)
 - There are sufficient commercial incentives in the energy market for base-load and mid-merit generators to meet demand outside of Peak Trading Intervals. As a result, the role of performance requirements is around ensuring generators can meet the incremental energy requirements during the daily peak.
 - Generally commercial incentives along with those incentives provided by the energy market and capacity refunds will ensure that there is reliable supply during peak periods. However these may be insufficient for some high-cost generators who infrequently participate in the energy market (i.e. low profit contribution) under the current market design.
 - Changes to implement dynamic capacity refunds would create greater commercial incentives for high-cost generators to ensure they have sourced sufficient fuel, thereby potentially enabling the current prescriptive fuel requirements to be removed from the rules.
- DSM – Harmonisation (Issue 2)
 - All capacity resources and availability classes are treated equally under the current design. That is, DSM capacity is valued the same as generation capacity¹.
 - Despite the requirement that all capacity is treated the same, there is a significant divergence between the performance requirements for DSM and Scheduled Generators currently.

Reflective of these underlying considerations in the existing market design the key proposals that were determined to proceed through to the Rule Change Process were to:

- Relax the requirements for facilities to have firm fuel supply contracts in place, provided that the capacity refund mechanism is assessed to provide sufficient commercial incentives for Facilities to be available when required;

¹ Dr Tooth noted that there are a number of advantages and disadvantages in DSM in terms of its contribution to reliability and it would be premature comment on its relative value (refer to page 24 of the combined 17 April 2012 meeting papers).

- Revise the DSM availability requirements, including allowing unlimited dispatch events per year, decreasing the minimum notice period for dispatch and ensuring DSM is available for an unlimited number of hour each year;
- Require all DSP's to provide a telemetry service providing real time information on availability and performance;
- Removing the "third-day rule" – whereby a DSP dispatched for a third continuous day is not subject to capacity refunds;
- Enabling dispatch of DSP's outside of their nominated availability limitations on a best efforts basis; and
- Amend the operation of the Non-Balancing Dispatch Merit Order to be based on time since last dispatch.

It is important to note that the RCMWG was not in unanimous agreement on these proposed changes.

Proposed changes

The IMO proposes a suite of changes to implement the key proposals outlined above with respect to harmonising DSM with generation capacity and to relax the current fuel requirements for Scheduled Generators.

Alinta's views

Alinta supports the proposed changes as representing a significant improvement over the current market design. However, Alinta believes that any changes to the Market Rules in regard to the Reserve Capacity Mechanism should be postponed until after the findings of the State Governments review into the design and functions of the WEM are published. The role of DSM should be considered as part of this wider review and any recommendations from this review should be incorporated into a future DSM Harmonisation paper.

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

Issue 1 - Fuel Requirements

Alinta supports the principles behind the IMO's proposal to relax the fuel supply arrangements and enable Scheduled Generators to determine how they manage peak energy provision requirements on the grounds that the changes:

- Enable Scheduled Generators to determine the most cost effective way of minimising the risk of non-performance during peak periods by acquiring fuel supply via a range of firm and non-firm arrangements;
- More appropriately take into account the role of the capacity refund mechanism in encouraging the right behaviours from participants to ensure reliability of supply during peak periods - particularly under a proposed dynamic refund mechanism;

- Ensure that the risk of non-supply during peak periods is placed on the appropriate party to mitigate the risk (i.e. the generator); and
- Removes an existing unnecessary regulatory interference in the market design.

Alinta notes the IMO's assessment that there are sufficient commercial incentives in place to ensure generators secure sufficient fuel supply. However if any facilities fail to perform during peak events because they have failed to secure fuel then it would be appropriate for the IMO to take this into account during subsequent capacity certification processes. This would ensure participant's behaviours remain in line with the intention of the capacity mechanism – that is to provide sufficient reliable capacity to meet the WEM's peak requirements (including a reserve margin).

Issue 2 - Harmonisation of DSM

Alinta is generally supportive of the IMO's proposal to harmonise the treatment of DSM with generation resources, but any changes to the Reserve Capacity Mechanism should be postponed and considered as part of the wider review of the WEM.

With respect to the IMO's proposal to amend clause 4.26.2CA to restrict a DSP from selling more capacity than it buys through IRCR, while supportive of the general concept, Alinta does not support the IMO artificially inflating the IRCR values by the amount of the relevant NTDL and TDL multipliers (refer to the proposed new step 11 of Appendix 5). Clarification of the rationale for taking into account the multipliers in determining the value of a DSP's Relevant Demand has been raised previously during the deliberations of the MAC on this proposal. Alinta does not consider that clear rationale for the adjustment has been provided at any stage during the relevant consultation process, including within RC_2013_10.

It is unclear why the IMO would continue to propose that the multipliers apply for the purposes of determining the "IRCR amount" to cap the DSP's level of capacity credits at without clearly outlining any form of rationale. It is not that case that any other type of facility gets its level of capacity adjusted upwards by any sort of multiplier. The intention of the IRCR is to determine an individual loads' contribution to peak demand and attribute a cost to be borne by the Participant for the installed capacity to service this peak demand requirement. This is different and separate to the intention of Reserve Capacity Certification, which looks to assign a level which reflects the true capability of a facility. The principle of ensuring that a facility is certified at the level which reflects its true ability to provide energy (in this case an energy reduction) at the peak should apply for the purposes of certification across the board. To maintain the adjustment for the multipliers inherently discriminates against generators.

More holistic consideration of DSM's treatment in the market required

Despite the proposed changes to the treatment of DSM it will not be the case that it is actually harmonised with traditional generation technologies. DSM will continue to not pay market fees; to have reduced availability requirements when compared to generation; to not be in the Balancing Merit Order (BMO); to have lower capital costs compared to generation – for which they are over compensated for; and will continue to not have its performance appropriately measured. While some of these differences in the treatment of DSM may be

appropriate² it is evident that the concept of treating DSM the same as generation capacity is neither practical nor reflective of the actual value contribution that the alternative technologies provide in meeting system peaks. It is simply not true that DSM capacity is the same as generation capacity.

Alinta does not dispute the value that DSM can potentially provide in ensuring that during peak demand events load shedding is not required. Appropriately DSM will most likely always be one of the last facilities types dispatched by System Management. This is due to the high opportunity costs associated with dispatch of DSM³. As a result it is unlikely that DSM will be dispatched frequently meaning its value is only realised on a limited number of occasions. While the frequency of dispatch of DSM is not dissimilar to that of a peaking generator there are significant differences between DSM and peakers which need to be more appropriately accounted for such as:

- the drivers for performance of DSM differ materially to those of a generation assets. Alinta notes that the drivers for performance of a DSP differ to those of a generator as for those Associated Loads reducing their demand in the relevant Trading Intervals is a second order consideration to their normal operations. They will (quite rightly) make a case by case assessment of the cost of stopping their normal operations vs. any refunds they may be exposed to from their aggregator (which may necessarily be for the full amount of capacity refund exposure). Similar drivers do not exist for generators whose core function is to produce energy or they are exposed to capacity refunds;
- the fixed capital costs associated with DSM are significantly lower than those associated with developing a peaking generator; and
- it is unlikely that through the energy market alone DSM would be able to recover its variable costs given the high opportunity costs to some Associated Loads of curtailing consumption.

To ensure that DSM is appropriately compensated for its value to the market while ensuring that unnecessary costs are not incurred, Alinta supports considering the introduction of differential pricing for DSM. That is DSM would receive a lower capacity payment (via either a reduced price or quantity) and a higher energy payment (for example based on an administratively set price cap that would allow DSM to recover its reasonable variable costs) which would provide a greater incentive to DSM to be dispatched off.

Alinta also supports considering options to implement a dynamic baseline for measuring the performance of a DSP. The continued use of the static Relevant Demand methodology is a deficiency in the market design and means that DSP's are not incentivised (and rewarded) for acting in a manner more similar to a stand-alone generator. It is entirely possible under the current Relevant Demand methodology for loads to not actually reduce their consumption and yet be rewarded (i.e. where a load has been turned off since the last hot season).

² For example there may not be sufficient benefit associated with including DSM in the BMO given the significant opportunity costs associated with providing a demand reduction will mean that they remain at the top of the dispatch order and the significant complexity of including DSM into the BMO.

³ Alinta notes that the opportunity costs for Associated Loads of reducing their consumption and therefore not producing "widgets" could be very significant for some large industrial loads.

These broader issues associated with DSM need to be considered more holistically as part of the broader WEM Review that is currently underway. The current approach of treating DSM the same as generation capacity fails to consider the significant differences in the cost structures of DSM vs. traditional generation and results in DSM's true value to the market not being realised by failing to incentivise the right behaviour. For example there are significant incentives for DSM to sit at the top of the merit order and never be called given they receive substantive capacity payments compared to their fixed costs. If DSM were to receive a higher energy payment and lower capacity payment very different behaviour to that currently incentivised under the RCM would likely result. DSM would want to be dispatched at during peak periods in order to receive high energy payments, whereas currently DSM is best off if they are not dispatched (particularly given the high opportunity cost of some Associated Loads). Shifting DSM to be a predominantly energy based product would potentially change the nature of the loads that are associated with a DSP by encouraging those loads that actively want to be dispatched in high energy cost periods and removing those loads that are simply hoping to never be called and yet be compensated by the capacity mechanism.

Differential pricing for DSM facilities is also justified on the basis that a DSM facility's maximum capacity capability is only "theoretical" prior to a dispatch event; whereas a peaking generator's maximum capability is physically measurable prior to a dispatch event occurring. The unknown component of a DSM facility's capability stems from the variability of consumption of the individual Associated Loads which make up the total capability of the facility, and as such, at any given time, the potential capability of a DSP is unknown to the market. Telemetry will assist in making this more evident to the market prior to dispatch, it will however not address the fact that there is a fundamentally different risk profile associated with the dispatch of DSM (compared to traditional peaking generation). Telemetry will also not account for the fact that DSM's performance is subject to influence by more external factors such as consideration of opportunity cost and volatility in the consumption by each of the individual loads (as referred to above). Alinta considers that these inherent underlying differences between DSM and traditional peaking generation would be more appropriately accounted for by further incentivising performance of the facility during times where it actually becomes a "physical" facility i.e. during a dispatch event.

The current treatment of DSM also appears to be further exasperating current market issues. Given the current oversupply of capacity it is particularly attractive to invest in DSM as the likelihood of dispatch is significantly reduced compared to if there were a shortage of capacity. That is DSM can enter the market and earn a substantive capacity income (compared to its fixed costs) while having very little risk of actually needing to perform currently.

Alinta considers that these fundamental issues associated with the treatment of DSM under the Market Rules warrant prompt further consideration with a view to ultimately ensuring unnecessary costs are not incurred and that DSM is appropriately compensated commensurate with its benefits to the system and underlying cost structures. Alinta looks forward to continuing to discuss these important matters during the consultation processes for the broader review of the WEM design.

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