



INDEPENDENT
MARKET
OPERATOR

Wholesale Electricity Market Submission to Rule Change Proposal

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

Submitted by

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Submission

Submissions for Rule Changes should be submitted to:

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

System Management's review of this Rule Change Proposal covers four of the seven issues included in this Rule Change Proposal.



These are listed below

Issue 1 - Fuel Requirements for Generators

Issue 2 - Revised Requirements for Demand Side Programs (DSP)

Issue 3 -Real Time telemetry Services for DSP

Issue 5 - Non-Balancing Merit Order

General

System Management is of the view that the Rule Change Proposal in general will add to the available capacity for a greater duration each year and so should increase the reliability of the SWIS.

System Management still notes however that there is no change to the availability during Non Business days essentially weekends and public holidays, hence the limitations for finding extra capability during fuel shortages and maintenance assessment may remain.

Issue 1 - Fuel Requirements Reduce Reliability Incentive

System Management concurs with the following sentiments of the Tooth Report

“Generators have a number of existing commercial incentives to provide reliable supply. The combination of the market for energy, ancillary services and capacity refunds provide incentives for many generators to provide capacity most of the time.

However these commercial incentives may be insufficient in some circumstances to encourage Scheduled Generators to take the necessary measures to achieve the appropriate level of reliability. During peak Trading Intervals, the capacity refunds are very small relative to value of capacity. During the peak Trading Intervals the capacity refunds are in the order of 0.03 per cent of the reserve capacity price and are much smaller relative to the value of lost load.

The risk of the incentives being insufficient will be greater for high-cost peaking generators (where the profit contribution from participating in the energy market is low) and in unusual circumstances, where the benefits of additional risk management may be small. If it is expensive to ensure availability of fuel for periods when the likelihood of being dispatched is low, then generators may not put in place sufficient measures to guarantee availability.”

System Management notes the Reserve Capacity Working Group concluded

“The RCMWG concluded that the fuel requirement could be relaxed if it expected that the Facility owner would have sufficient incentives to take appropriate measures to ensure that fuel would be available.” (emphasis added)

System Management believes this is effectively an open finding, as to date, there is no evidence that the sufficient incentives exist.

This Rule Change Proposal states that the analysis in the Tooth report

“concluded that there are currently sufficient commercial incentives for Scheduled Generators to provide reliable supply, irrespective of the fuel requirements in clause 4.11.1(a).”

This statement does not match the report as no conclusion in regard to this issue was made in the report.

In addition the proposed rule change deletes Clause 4.10.2 which prevents a facility claiming to be Dual Fuel unless it has alternative fuel for 12 hours on site.

This removal has perverse flow on effects for facilities registered as dual fuel facilities. Such a facility can be registered as with a non firm primary fuel (generally gas) and a alternate fuel of liquid. Even with no alternate fuel available this facility is still able to offer at the Alternative STEM Price.

Summary

System Management does not support these changes made by this Rule Change Proposal as it may decrease system reliability.

Issue 2 - Revised DSP Requirements – Reduced Reliability Incentive

The Proposed Rule Change changes the refund mechanism for DSP.

System Management understands that no discussions around this topic were held at the Reserve Capacity Working group meeting. Observations of the minutes also show that no discussions were held.

System Management estimates the current refund mechanism is in the order of 0.25 times the monthly capacity payment per trading interval, a strong incentive for a DSP to make its capacity available. (this assumes certification for 24 hours which is typical and calculation of rule 4.26.3A as given below)

“4.26.3A. The Demand Side Programme Capacity Cost Refund for Trading Month m for a Demand Side Programme is equal to the lesser of:

(a) twelve times the Monthly Reserve Capacity Price for Trading Month m multiplied by the number of Capacity Credits associated with the Facility, less all Demand Side Programme Capacity Cost Refunds applicable to the Facility in previous Trading Months falling in the same Capacity Year as Trading Month m; and (b) the sum of: i. the sum over all Trading Intervals t in Trading Month m of:

$$12 * \text{Monthly Reserve Capacity Price} * S / (2 * H)$$

Where:

S is the Capacity Shortfall in MW determined in accordance with clause 4.26.2D in any Trading Interval; and

H is the maximum number of hours that the Facility was certified to be available in accordance with clause 4.10.1(f)(ii);

And

ii. the Facility Reserve Capacity Deficit Refund for Trading Month m for the Facility, determined in accordance with clause 4.26.1A.”

The new formulation of rule 4.26.3A makes this around 0.004 times the monthly capacity payment per trading interval, a significantly weaker incentive. (this assumes a daily availability of 6 hours per day and TIRR is monthly capacity price divided by the number of trading intervals in the month)

System Management believes the “equivalencing” of DSP to supply side refunds should not be based only on availability, and must recognise that DSP are only expected to be dispatched after all supply side options have been exhausted and so face a minimal risk of facing capacity refunds. Even on Peak load days its is unlikely that DSP will be called in the near future as the amount of capacity from generation is well in excess of the demand.

System Management also notes that to be truly equivalent, DSP should also be paid the availability payment per trading for the trading intervals they are available as per supply side facilities.

Summary

System Management does not support these changes made by this Rule Change Proposal as it may decrease system reliability.

Issue 3 Real Time Telemetry – Cost Benefit Analysis and Clarity

Cost Benefit Analysis

Real Time Telemetry DSP

The need for Real Time telemetry was first raised in the Sapere Report

“Performance requirements for demand-side and supply-side capacity resources May – Working Group Meeting DRAFT”

The report commented

“A challenge with the use of DSPs, is that System Management does not have real-time information on the availability and performance of DSPs. The lack of information means that System Management is likely to be less confident in the use of DSM and less able to efficiently use DSPs. For example, without real time information System Management would be more likely to dispatch all DSPs at once rather than stagger the use of DSPs.”

Page 281 http://imowa.com.au/f5415,2873659/Meeting_4_Combined_Papers.pdf

System Management understands this to mean System Management is uncertain on how much load reduction will take place after it has sent a dispatch instruction to a DSP as it may already be at a load lower than its specified baseline, so it might dispatch 30MW of DSP when it is only looking for a 20MW reduction to cover this uncertainty. This is considered to be inefficient.

The Rule Change proposal states

“However, in the interests of harmonisation, there is a benefit to the consistent provision of real-time information on availability and performance of DSP’s.

Without the implementation of a real-time telemetry service, the benefits of the other issues identified in this Rule Change Proposal are somewhat limited.”

These benefits are not clear in the Rule Change proposal and have not been established or attempt to be measured either qualitatively or quantitatively.

Real Time Telemetry Associated Loads

System Management understands that this proposal for real time data of associated loads was not discussed at the RCMWG or included in the PRC_2013_10 considered at the MAC meeting of 7th August 2013.

System Management believes the value of each associated load is not relevant for dispatch, it is the value of the DSP that is important. The requirement to telemeter each associated load is additional cost that has no demonstrable benefit.

Clarity

Monitoring

Historically the IMO has monitored the compliance for a DSP by comparing it metered quantity with its instruction.

The Rule Change Proposal requires System Management to monitor DSP compliance with Dispatch Instructions given in Market Rule 7.7.3E. It is unclear as to the reason for change to the historic method of compliance.

System Management is required to set a tolerance around and report to the IMO if the actual output MW is outside the tolerance around the dispatch instruction.

System Management is unclear as to what how this is practically steps are necessary to meet this obligation.

Dispatch Instructions require a DSP to be given as “a required decrease in consumption, in MW”. It is unclear as to how this can be monitored if the initial starting level is not defined.

This monitoring obligation will result in additional costs to System Management. As it is unclear what is required by this obligation it is not possible to determine what these costs will be and if there are any additional benefits from the current rule monitoring performed by the IMO..

Summary

3 major concerns in regard to this Issue

- 1. There is no cost benefit analysis for telemetry of DSPs*
- 2. There is no benefit of having to process telemetry for individual associated loads.*
- 3. There are practical implementation and cost issues in System Management monitoring the compliance with the Dispatch Instruction to DSPs*

Issue 5 Non Balancing Merit Order - Clarity

System Management notes that the Rule Change proposal requires System Management to provide the IMO with a copy of the DSM Dispatch Instructions at 6.30pm on the trading day. This is currently sent on the next business day at noon as required by Market rule 7.13.1(b).

System Management also believes there is also a lack of clarity about DSP instructions as it appears in Market rule 7.13.1(b) and (g).

System Management believes it should only send this information once and as such this Rule Change Proposal should remove its requirement from 7.13.1 also.

This now creates an additional information transfer timeline between System Management and the IMO which requires extra resources to ensure a correct transfer. A rationalisation of these transfers should be considered.

System Management notes it must give Dispatch Instructions for Dispatchable Loads to the IMO at 6.30 pm.. Dispatchable loads are closely related to a scheduled generator and would normally sit within the definition of “Balancing Facility”. The balancing rules have essentially deferred treatment of Dispatchable Loads. It is inconsistent to include them at this time.

Summary

System Management believes that efficiencies can be achieved by rationalising the data transfers it makes to the IMO in regard to dispatch instructions for DSPs.

Appendix 1 Reliability Assessment by PA Consulting

The Rule Change Proposal includes a letter from PA consulting in regard to the reliability assessment.

The letters states that the methodology uses a Load Duration Curve an Expected Unserved Energy criterion.

System Management is of the view that a times series analysis is required to be able to account for the unavailability of DSM during non business days.

Additionally, this analysis does not indicate Market rule 4.5.12 (b) (given below) is accounted for in determining the minimum generation quantity.

“the Planning Criterion and the criteria for evaluating Outage Plans set out in clause 3.18.11 were to be applied to the load scenario defined by clause 4.5.12(b)(i),”

Summary

System Management, as the entity responsible for evaluating outage plans, wishes to be able to work with the IMO to clarify the calculations made under this rule.

2. Please provide an assessment whether the change will better facilitate the achievement of the Market Objectives.

System Management does not believe that all aspects of the Rule Change Proposal supports the Market Objectives.

Objective 1 (a) To promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system.

The Rule Change Proposal does not promote the reliability objective as it reduces the incentive for both Generators with non firm fuel and DSP to be available

In addition the Rule change Proposal does not demonstrate an improvement to the efficiency objective as it adds additional cost without describing or quantifying tangible benefits.

3. Please indicate if the proposed change will have any implications for your organisation (for example changes to your IT or business systems) and any costs involved in implementing these changes.

System Management agrees with the costings it has previously supplied in regard to the realtime data transfers via a B2B interface it would incur by this Rule Change Proposal.

4. Please indicate the time required for your organisation to implement the change, should it be accepted as proposed.

System Management believes it would take approximately 12 months to implement the changes after approval to proceed.
