Report to

Independent Market Operator

Economic Assessment of Rule Change 27

21 November 2008

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

VERSION

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GLOSSARY

The following tables described abbreviations used in this report

Abbreviation	Description
IMO	Independent Market Operator of Western Australia. It operates the Wholesale Electricity Market in the Perth and goldfields region.
IRCR	The Individual Reserve Capacity Requirement that defines each retailer's capacity obligation. This measure is adjusted as retail customers move among the retailers.
MMA	McLennan Magasanik Associates
SRC	Supplementary Reserve Capacity which is purchased by IMO to cover any deficits that might arise in meeting the aggregate capacity requirement for the WEM
WEM	Wholesale electricity market in the south-west interconnected system of Western Australia

EXECUTIVE SUMMARY

McLennan Magasanik Associates was requested by the IMO to act as an independent expert to assess whether the proposed Rule Change 27 supports the achievement of the Market Objectives.

This proposed rule change seeks to adjust clauses 4.28.3 and 4.28.4 of the Wholesale Electricity Market Rules (Market Rules), effectively removing the net payments made by the IMO under any Supplementary Capacity Contracts from the Targeted Reserve Capacity Cost and including these in the Shared Reserve Capacity Cost.

MMA reviewed the submissions from the first round of consultation and chaired the Public Workshop on 14th November 2008. MMA has also reviewed further written submissions that were prepared following the Public Workshop. These supplementary submissions further supported the positions taken previously by market participants.

MMA concludes that the proposed Rule Change does support the achievement of the Market Objectives, especially in relation to support for retail competition which in turn is expected to deliver lower costs to consumers.

MMA does note however, that this Rule Change 27 could be made more efficient and equitable by means of further changes to the Market Rules, some of which have been already proposed by the IMO as part of other consultation processes:

1. Funding of Supplementary Reserve Capacity in the event of capacity credit cancellation. The current rule change proposal, RC_2008_34, seeks to proportion the total cost of funding the Supplementary Capacity Contracts in such a way that each relevant Market Participant only pays the portion which is attributable to its capacity being unavailable to the market. In particular, capacity shortfalls attributable to generators experiencing forced outage, including late commissioning, are proposed to be funded by the affected generators via compensation payments that offset the Shared Reserve Capacity Cost; and

2. Funding of Supplementary Reserve Capacity in the event of forecast error. The rule change proposals RC_2008_27 and RC_2008_34 together recover these costs via the Shared Reserve Capacity Cost mechanism, effectively sharing the cost across Market Customers in proportion to each Market Customer's Individual Reserve Capacity Requirement. It is MMA's view that the Market Objectives could be better achieved if this cost component was recovered at least in part via the Targeted Reserve Capacity Cost mechanism.

Having reviewed participant responses to the consultation process, MMA does have concern that even with a coincident approval of rule change RC_2008_34, albeit modified for our suggestion to address funding in the case of forecast error, there may be benefit in the industry considering either:

- the introduction of a co-insurance reserve fund that could be used to offset some of the Targeted Reserve Capacity Cost, or
- a distribution of the portion of Supplementary Reserve Cost that is equivalent to the Maximum Reserve Capacity Price according to the Targeted Reserve Capacity Cost with the balance of the cost under the Shared Reserve Capacity Cost. The portion distributed under the Targeted Reserve Capacity Cost would relate to IRCR associated with new meters.

thereby alleviating some excessive cost risk that could otherwise occur at the limits of available capacity whilst maintaining incentive for retailers to contract bilaterally. A coinsurance reserve fund could be funded by a small levy on Market Customer load, thereby accumulating funds until such time as a desired pool is achieved. This would serve to smooth the cash and reduce credit risk in the market generally.

These arrangements would provide better incentives for retailers to manage the uncertainty of the demand of their customers and smooth the cash flows associated with purchase of supplementary capacity to cover forecast error.

1 INTRODUCTION

1.1 Supplementary Reserve Capacity

During August 2008 the Market Advisory Committee (MAC) established a Working Group to consider a number of issues that were identified with respect to the Supplementary Reserve Capacity (SRC) provisions of the Market Rules, including:

- appropriate funding for the additional costs associated with the use of the Supplementary Reserve Capacity (SRC) mechanism and the distribution of these costs amongst Market Participants;
- the appropriateness of a causation built into the mechanism, where the failure by a generator (or DSM provider) to meet its obligations, would see these additional costs sheeted home to that party; and
- the definition of Eligible Services under the Market Rules to allow for existing capacity that is available (but has only acquired Capacity Credits for future cycles), including the contribution/measurement of such capacity when deciding if SRC is required and the ability to compensate such contribution.

This working group was tasked with considering these issues and if necessary developing amendments to the Market Rules, focussing on clauses 4.13.11, 4.24 and 4.28 of the rules.

1.2 Recommendations

The SRC Working Group has recommended three rule change proposals, these are:

- Funding of Supplementary Reserve Capacity, RC_2008_27: This rule change proposal protects a retailer that has not fully covered its IRCR from potentially bearing significant proportions of entire cost of SRC. This rule change, if implemented, would remove the net payments to be made by the IMO under Supplementary Capacity Contracts from the Targeted Reserve Capacity Cost and include it as a component in the Shared Reserve Capacity Cost. This rule change is currently out for the second round of public consultation and is the subject of this report.
- Eligible services for Supplementary Reserve Capacity, RC_2008_28: Under this rule change proposal, Registered Facilities which hold capacity credits for future Reserve Capacity cycles are permitted to enter the SRC process. The first round of consultation for this rule change proposal has recently closed and the draft rule change report is currently being prepared (due to be published 21 November 2008).
- Funding of Supplementary Reserve Capacity in the event of capacity credit cancellation, RC_2008_34: This proposed rule change relates to the funding of Supplementary Capacity Contracts. It reflects the deliberations of the SRC Working Group that if a market participant has its capacity credits reduced or experiences an extended forced outage, which results in a shortfall and SRC is called, the cost of SRC

should be targeted at the market participant. The rule change notice is currently being prepared and notification was published Friday 7 November, with the first round of consultation being held from 10 November through to 22 December 2008.

This draft of this report relates to RC_2008_27: Funding of Supplementary Reserve Capacity, the submissions received during the first round of public consultation and the information obtained at the Public Workshop held on 14th November 2008. It does not include the information that is to be provided by some market participants following the Workshop.

1.3 Responses to Draft Report

The response to the Rule Change Proposal was mixed. Two submitters supported the proposal in its entirety (Land Fill Gas and Power and Synergy), one submitter (Griffin Energy) supported the proposal but interpreted the impact on the market objectives differently to that proposed by the IMO. One submitter (Alinta) did not support the proposal, citing a number of reasons for this. However, Alinta agreed that changes were needed but has not specified a comprehensive alternative plan.

1.4 Public Workshop

Given the range of views from the first submission period, the IMO decided that it would be beneficial to issue the draft rule change report, and then conduct a public workshop on 14th November 2008, during the second submission period. The objective of this workshop was to review the issues raised from submissions and report on progress of the SRC working group, in respect of this rule change. Dr Ross Gawler chaired, and Mr Scott Maves of McLennan Magasanik Associates (MMA) attended this workshop at the request of IMO and took note of the comments made.

1.5 Responses in and following the Public Workshop

Four written submissions including one confidential submission were received following the Public Workshop from Landfill Gas and Power, Alinta and Perth Energy. The Perth Energy submission expressed concern about the financial risk to small retailers having inequitable and large to the SRC cost. They may be forced from the market with the SRC costs shared in any case. The Landfill Gas and Power submission further argued the difficulty of maintaining a balanced bilateral position relative to a moving target month by month that is not easy to forecast accurately. Alinta maintained its position that the Rule Change does not promote long-term bilateral contracting and the market efficiency which results from securing generation resources.

1.6 Independent Review

The IMO also commissioned McLennan Magasanik Associates as an independent expert to review the rule change in light of the submissions received. This report summarises the outcome of the Workshop and provides MMA's analysis of the economic impact of the Rule Change. On balance, MMA considers that the change to the Market Rules does

support the Market Objectives and that the change should be supported. MMA agrees that other changes are needed to make the resulting rule changes effective.

Further, MMA considered that the sharing of costs for the Supplementary Reserve Capacity arising from demand forecast error in principle should be shared among the retailers that do not have spare capacity to cover the increased demand. This would mean that forecast error would be included under the Targeted Capacity Cost as currently. However, it was recognised that such arrangements would need to carefully consider the resulting exposure to smaller retailers, even if they had shared in the extra growth in demand. There would still remain substantial risks that could only be addressed by careful rule design and testing. Thus might be further considered under rule change 34.

1.7 MMA's Process

MMA's approach to the task was to follow the following process:

- review the process t o date under Rule Change 27;
- identify the ways in which the current arrangements and the proposed arrangements could affect the achievement of the Market Objectives and prepare an outline;
- Attend the Public Workshop on 14th November to gain further perspectives. Ross Gawler and Scott Maves attended;
- Finalise a working draft report by 18th November and update it by 25th November following receipt of written submissions after the Public Workshop
- Finalise a draft report by 28th November; and
- Review final submissions and prepare Final Report by close of business 5th December 2008.

2 PROCESS FOR RULE CHANGE

2.1 Background

The Market Rules for the WEM provide for a capacity mechanism to support the reliability of the market operation. The IMO conducts an auction process in the event that the approved capacity is insufficient to meet the capacity requirement. Market customers may procure capacity under bilateral contracts or purchase capacity credits from the IMO at a regulated price.

The Targeted Reserve Capacity Cost includes the cost of reserve capacity purchases by the IMO that make up the difference between the capacity covered under bilateral contracts and the total reserve capacity requirement of the system. Thus it represents an alternative mechanism for retailers to meet their capacity obligations if they are unable to exactly match their bilateral contract position to their peak demand supplied.

Insufficient capacity may occur due to five scenarios:

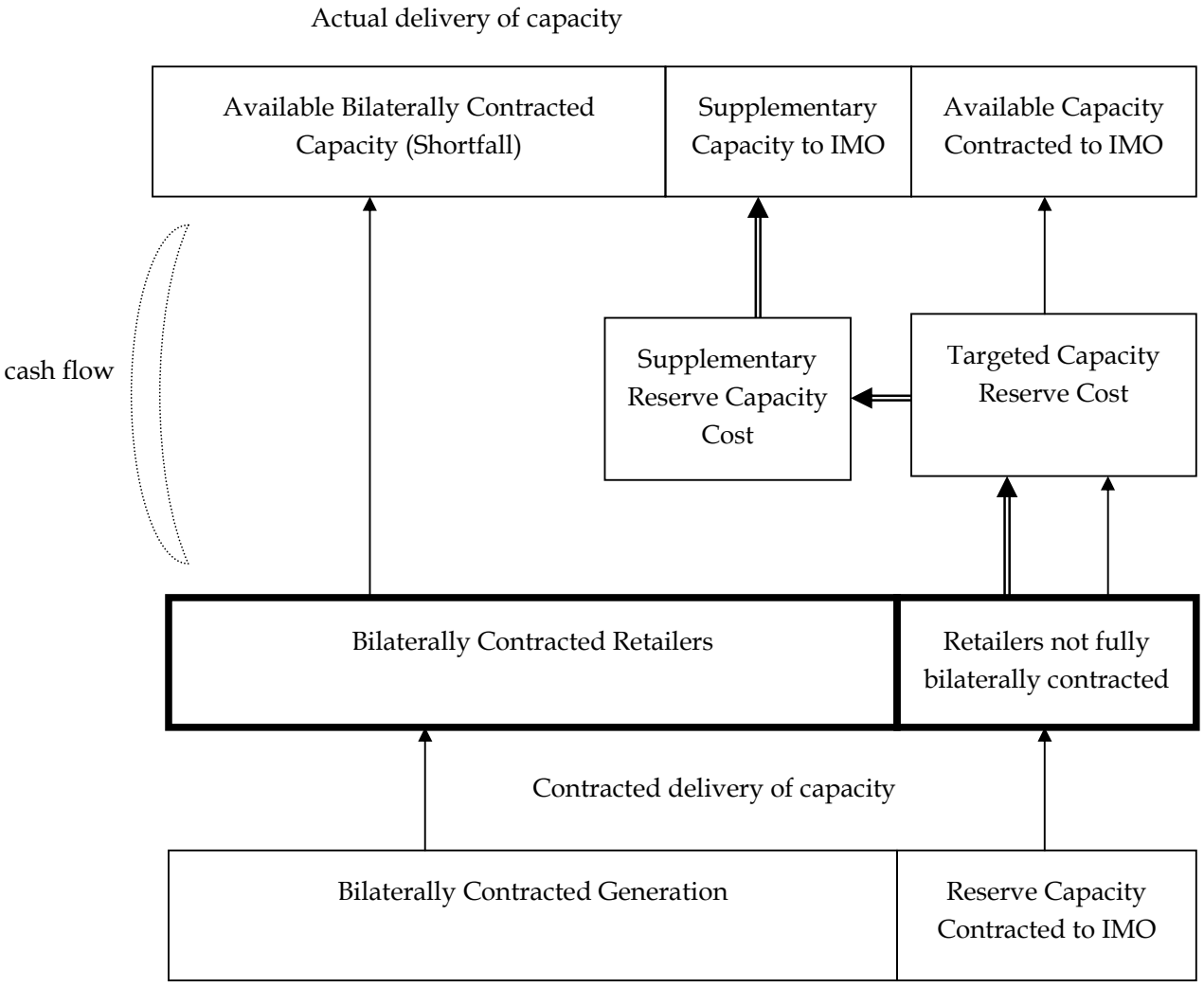
1. Insufficient capacity being offered when IMO conducts an auction. This is known as a "simple shortfall"
2. Late commissioning of a new generator
3. Outages of existing generation plant that erode the reserve capacity available
4. Errors in demand forecasting when the auction was conducted two years previously such that additional capacity is needed to restore the reserve margin
5. Generators withdrawing their capacity to make it ineligible to qualify for capacity credits.

In the event of such scenarios, IMO may procure supplementary capacity to make up the system requirement. Under current arrangements the extra capacity is paid for by the market participants that do not have full bilateral coverage for their capacity obligation. This is recovered under the Shared Capacity Cost.

A mapping of the payment streams as currently conducted is shown in Figure 2-1 for a situation where the generators providing bilaterally contracted capacity experience a shortfall. In this case the Supplementary Capacity which makes up the shortfall is funded by penalty payments from non-performing generation plus supplementary payments included in the Target Capacity Cost which is paid by retailers that are not fully covered under bilateral contracts.

The problem this causes is that under current arrangements any deficit of capacity supply which requires a Supplementary Capacity Reserve payment is recovered through the Targeted Reserve Capacity Cost and not the Shared Reserve Capacity Cost. This means that retailers which are not fully covered by bilateral contracts with embedded capacity

Figure 2-1 Reserve Capacity Payment Streams with a Capacity Deficit – Existing Scheme



are exposed to the risk of additional payments if a generator fails to perform and the IMO has to incur additional costs to meet the reserve requirement.

This has the advantage that it encourages retailers to seek bilateral contracts to meet their capacity obligations, so that their risk profile is the same as competing retailers already fully covered through a bilateral contract. However, it has the substantial disadvantage that it creates additional risks for small retailers and may create a barrier to retail entry. The barrier to entry occurs because a new retailer may not be able to always match its varying retail portfolio to a wholesale bilateral contract because only a large generating portfolio is able to provide a contract with capacity variation.

It has been argued by Synergy that the Market Rules almost guarantee that at least one retailer will have inadequate coverage in the event of a shortfall in capacity credits because there will be no competition when the last 1 MW capacity credit is up for sale. The owner may prefer to bid it into the Supplementary Reserve Capacity procurement

process rather than sell it before hand because it could obtain a much greater value that what may be recovered from the remaining retailer.

The focus of this report is the situation where there is a deficit of reserve capacity due to plant failure, new plant commissioning delay or forecasting error, and Supplementary Reserve Capacity is required to make up the costs of the extra capacity less the penalty payments received from defaulting capacity providers. The Market Rules provide for suppliers which have failed to deliver adequate capacity to make penalty payments which offset the cost of purchasing replacement capacity if it is available. This replacement capacity can be offered from the demand side through load reductions in response to capacity shortages. If the cost of replacement capacity exceeds the penalty payments, then the IMO must recover the net cost of the Supplementary Reserve Capacity. Under the current arrangements, this cost is shared among the market participants which do not have complete coverage under bilateral contracts. This creates inequity, but does it threaten the market objectives if it is fixed? That is the critical question addressed to MMA.

3 METHODOLOGY

3.1 Market objectives

The market objectives state in Clause 1.2.1:

Table 3-1 Market objectives

The objectives of the market are: a) to promote the economically efficient, safe and reliable production and supply of electricity and electricity related services in the South West interconnected system; b) to encourage competition among generators and retailers in the South West interconnected system, including by facilitating efficient entry of new competitors; c) to avoid discrimination in that market against particular energy options and technologies, including sustainable energy options and technologies such as those that make use of renewable resources or that reduce overall greenhouse gas emissions; d) to minimise the long-term cost of electricity supplied to customers from the South West interconnected system; and e) to encourage the taking of measures to manage the amount of electricity used and when it is used.

3.2 Nature of the problem

The proposed rule change is seeking to address a "causality assignment problem" that presents two concerns that diminish the efficacy of the Supplementary Reserve Capacity mechanism and its associated funding and cost recovery arrangements:

- Inefficient Penalty Arrangements: Capacity shortfalls that can be attributed to particular providers of installed capacity, say due to the forced outage of a generation unit, are not necessarily, under the current Market Rules, paid for entirely by these particular providers. These providers are therefore not required to fully compensate the market for an overpayment of capacity credits that are not in the end delivered. An inefficient penalty of this type can have the effect of undermining the market mechanism by encouraging capacity to be offered to the market which may be in excess of what is realistically available, thereby contributing to inefficient investment signals, and raising cost risks for retailers and end-users. Rule change RC_2008_34 seeks to address this concern.
- Inefficient Payment Arrangements: The allocation of costs to retailers can be inefficient, requiring certain retailers to pay for capacity shortfalls that they did not contribute to, thereby providing a degree of cost risk that may be difficult or costly to manage, and imposing an asymmetrical risk upon retailers that may encourage greater than efficient contracting in the bilateral markets. This latter point recognises that the reserve capacity mechanism provides a balancing service that can provide an efficient mechanism for trading out of rigid contractual positions in the bilateral market,

particularly at the limits of installed capacity when a preference for flexible contract terms may raise transaction costs above what would otherwise be efficient. Inefficient payment arrangements of this type can give rise to strategic behaviour that may undermine the competition objective of the market. They can also diminish the economic efficiency of trading arrangements. Again, rule change RC_2008_34 seeks to address this concern, however is does not fully address inefficient payment concerns, particularly in the case of forecast error. In this case retailers with a large component of temperature sensitive load may be incentivised to strategically under-contract in the bilateral market, particularly when a forecast error is expected to occur. The cost of its contribution to the capacity shortfall is then shared across all retailers and load, effectively subsidising its capacity costs.

It is important that the IRCR is amended whenever a retailer gains or loses a retail customer. This supports the intent of the reserve capacity obligation and ensures that demand uncertainties are managed efficiently.

3.3 The Net Market Principle

Net markets such as the WEM are generally designed to provide balancing services to participants, allowing them to trade their net contract positions. This market design therefore complements adjacent bilateral markets where most trading occurs. A common design aspiration of such markets is that participation in the net market is optional, thereby allowing industry participants to be able to manage their exposure to the market, and indeed, to fully avoid the financial outcomes of the market if desired, thereby receiving financial firmness in their net trading costs. Experience in Western Australia, and in other net markets overseas, has shown that most industry participants find it optimal to participate in the balancing markets, thereby relying on the flexibility and efficiency that these markets provide for trading out of rigid contract positions, and for managing energy and capacity near the limits of their peak load when bilateral contracting can face very large transaction costs. This is particularly the case when the retail market is contestable, thereby increasing short-term imbalance risks for retailers as they win or lose customers.

In considering the allocation of reserve capacity costs, the net market principle would suggest that cost should be aligned with causality. In the event that a participant is fully contracted up to its individual reserve capacity requirement, it should be protected from the cost of a capacity shortage at the aggregate level, costs which would ultimately be caused by other participants. In practice however, most net markets feature some shared capacity cost that may be assessed independently of capacity holdings.

3.4 Distribution of costs

Markets operate most efficiently when risks are known and manageable, and when the costs and benefits associated with these risks are linked to causal or risk management behaviour. In the case of competitive electricity markets, if there is a regulated cost to be passed on that cannot be ascribed to the behaviour of a particular participant, or if the

offending participant becomes unable to pay the cost through insolvency, then it is best to distribute the cost in a manner that is considered equitable to the industry. This usually means sharing the costs across the market based on ability to pay, or based on average or peak energy consumption, or according to a more relevant cost driver. This leads to the distribution of costs across market participants based on a standard levy applicable to each purpose.

In the case of supplementary reserve capacity costs, there may need to be some compromise in the distribution of costs in the WEM, in a manner less aligned with the principle of "causer pays". This is because:

- The WEM is relatively small and not interconnected and therefore there is less diversity and depth in the range of capacity balancing and risk hedging solutions available to participants, making the risks of market imbalance greater than in a large fully interconnected system. Some of the smaller retailers are currently exposed to costs that could make them insolvent and over which they have no control.
- Market power exists in the WEM and a fully competitive market without some forms of market power mitigation is not a prospect in the WEM in the foreseeable future. Some participants have suggested that dominant suppliers of capacity may be able to offer capacity above a competitive price. While these assertions have not been investigated, the market is known to be concentrated, and a potential does exist for market power to be present. If it is exercised, it may be the case that supplementary reserve capacity costs may exceed a competitive level, which could diminish the economic efficiency and competitive neutrality of the Targeted Reserve Capacity Cost mechanism.
- The current arrangements do not cap the cost of supplementary capacity and therefore an uneven distribution of those costs among market customers can raise the cost of market entry for new small retailers and thereby diminish competition.

On this basis, some costs that cannot be fully allocated to or recovered from those responsible for those costs may need to be shared among all participants.

The problem with the Supplementary Reserve Capacity Cost is that it is a cost that is left over after a generator has not been required to or is able to fully compensate for the reserve capacity not delivered. The penalty on generators is based on various multiples of the capacity charge between 0.25 and 6.0 according to the time period in which the default occurs (Rule 4.26)

Market objectives such as shown in Table 3-1 may be influenced by the distribution of payments in accordance with the analysis shown in Figure 3-1. In this analysis we assume that the revised Market Rules would provide some reasonable limit on the exposure to Supplementary Capacity Costs that is distributed through the Targeted Reserve Capacity Cost. The reasonable limit could be based on the Maximum Reserve Capacity Price.

3.5 Forecasting error

The matter of forecasting error (scenario 4 in section 2.1) could do with some further analysis. IMO is responsible for the peak demand forecast and the reliability target from which the capacity requirement is derived. The Individual Reserve Capacity Requirement (IRCR) defines the market customer's capacity obligation that may be covered under a bilateral arrangement or by purchasing capacity credits from the IMO.

The current market rules recover the costs of supplementary reserve capacity relating to forecast error via the Targeted Reserve Capacity Cost mechanism. The rule change proposal RC_2008_27 seeks to recover this cost via the Shared Reserve Capacity Cost mechanism. In the case of capacity shortages caused by forecast error, and assuming that supplementary reserve capacity costs are efficient, MMA is of the view that the rule change could be improved to better align with the Market Objectives.

Typically, any change in the forecast would be associated with extra demand and extra sales by those retailers that serve a temperature sensitive customer portfolio, or that might have benefited from organic load growth. To a significant extent this change in forecast can therefore be traced to those customers that have volatile load characteristics, or to new growth regions, and for which metered consumption has trended differently from that which was assumed when the IRCR levels were initially set. To encourage retailers to manage their own growth opportunities, and to be financially responsible for the costs of the customer segments that they serve and acquire, it would be best if retailers made their own bilateral commitments to support their growth opportunities, or are kept financially responsible for the cost of their IRCR-assessed capacity shortage to the extent that they rely on the central decisions of the IMO to fill their capacity needs.

Under the current Market Rules, supplementary reserve capacity costs relating to forecast error go to the retailers that do not have bilateral cover for their revised demand. If a retailer made a bilateral commitment for their original IRCR and then their portfolio grew unexpectedly to exceed their bilateral position, they would then be exposed to the additional cost of supplementary capacity and they would be more likely to have the retail revenue to support that capacity purchase. If a retailer lost sales for whatever reason so that they did not share in the market growth, they would not be exposed to the supplementary capacity cost and they could sell their surplus capacity into the process for acquiring extra capacity.

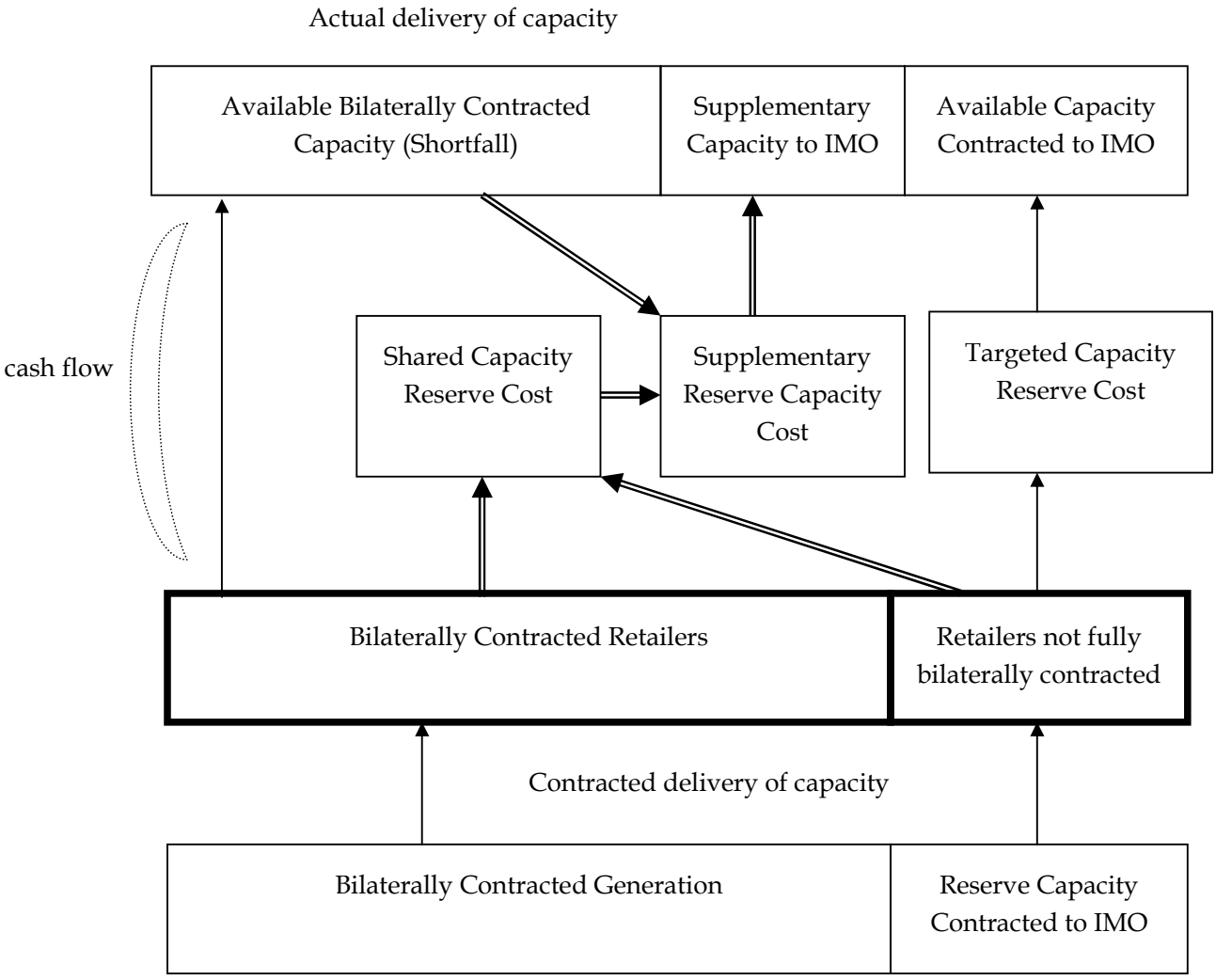
Assuming that supplementary reserve capacity costs are efficient, this is a more equitable way of distributing the cost of supplementary capacity for a forecast error than distributing it according to IRCR. The latter, and the outcome of the current rule change proposal, has the effect of shifting some of the costs of serving the volatile sector of the market to other retailers and customers. This could incentivise strategic behaviour, and undermine the bilateral market, as some retailers may contract below an efficient level, knowing that the cost of their capacity shortfall will ultimately be shared across other retailers via the Shared Reserve Capacity Cost mechanism. Assuming they benefited from an increase in metered sales to those customers that contributed to the forecast error, they

receive a wind-fall gain, and can free-ride on some of the associated cost. This can make the competitive playing field less even, and can undermine the net market principle by imposing an unmanageable cost risk on those participants that prefer not to participate in the market by fully contracting their requirements in the bilateral contract markets. The cost of this risk therefore results in an embedded cross-subsidy between volatile loads and those that have flat or stable load characteristics. These arguments suggests that in the case of forecast error, the current use of the Targeted Reserve Capacity Cost mechanism to recover supplementary reserve capacity costs may be superior that what is proposed by the rule change proposal.

However, there remains the difficulty of continuously matching a bilateral position to the changing demand and allocation of IRCR to retailers. Especially during the establishment phase of a new retailer, it is difficult to balance bilateral capacity to retail sales unless you have a very good flexible arrangement with a generator. That is only likely to happen in a supply surplus situation when supplementary capacity is not likely to be needed. If supply is tight, contracting becomes more difficult and expensive and retailers are more likely to be exposed to bilateral imbalance. Further, if market power is indeed an issue for the market, it would most likely be exercised during these tight conditions. The ultimate risk is that some of the Supplementary Reserve Capacity cost may be inefficient, rendering it preferential to share some of this excess cost.

Therefore, it may undermine economic efficiency and distort competition to fully recover the costs of forecast error in the manner that currently applies, that is, by using the Targeted Reserve Capacity Cost mechanism. This was the broad consensus of the IMO's Working Group and hence the recommendation to share the forecast error related requirement for supplementary capacity according to total IRCR rather than the net position. The cost recovery arrangements for the revised scheme are illustrated in Figure 3-1. Rule change proposal RC_2008_34 provides that the Supplementary Reserve Capacity Cost is jointly funded by generators as well as retailers according to the cause of the capacity shortfall.

Figure 3-1 Reserve Capacity Payment Streams with a Capacity Deficit – Revised Scheme



4 ANALYSIS

4.1 Participants' perspectives

Table A- 1 in Appendix A presents the perspectives of market participants as offered in their submissions and as clarified during the Public Workshop on 14th November 2008. Each participant's views are summarised in relation to:

- Impact on equitable treatment of market participants
- Impact on market efficiency
- Impact of the level of competition
- Impact of less well established retailers
- Impact of reliability

Table A- 2 summarises the consensus and compares this with the IMO's analysis and MMA's analysis as the independent expert.

We have taken the position that in relation to this Rule Change that it is primarily the level of competition which minimises the long-term cost of electricity supplied to customers. Thus the impact on overall costs apart from the effects of competition as a driving principle has not been separately considered.

4.2 Outcomes of the Public Workshop 14th November

The discussion at the Public Workshop on 14th November 2008 supported the submissions previously made in the first round of consultation. Some additional perspectives offered were as follows:

- Synergy argued that there would always be a retailer which could not completely cover itself against supplementary capacity cost risk simply because the last MW to be purchased would be held by one party which would prefer to obtain the uncapped supplementary capacity revenue rather then sell the capacity to the IMO or to the remaining party. Thus there would always be a high risk of an unfair distribution of the SRC cost.
- Verve supported Synergy's view recognising that it would bear the costs under the vesting contract of any supplementary capacity cost.
- Alinta argued that different scenarios should have different treatment and that causers should be exposed to costs. Alinta was adamant that retailers would be able to obtain bilateral coverage.

All presenters except Alinta supported the IMO's proposed Rule Change. Alinta considers that retailers should have the incentive to purchase bilateral contract cover to avoid exposure to SRC.

4.3 Written Responses following the Public Workshop

Four written submissions including one confidential submission were received following the workshop from Landfill Gas and Power, Alinta and Perth Energy. The Perth Energy submission expressed concern about the financial risk to small retailers having inequitable and large to the SRC cost. They may be forced from the market with the SRC costs shared in any case. The Landfill Gas and Power submission further argued the difficulty of maintaining a balanced bilateral position relative to a moving target month by month that is not easy to forecast accurately. This leaves less well established retailers with volatile retail positions at a significant competitive disadvantage. Alinta maintained its position that the Rule Change does not promote long-term bilateral contracting and the market efficiency which results from securing generation resources.

4.3.1 Bilateral contracting

Concerning the matter of the availability of bilateral contracts, Alinta stated: "*Alinta has offered to contract with those retailers for capacity credits at competitive prices based on the Administered Reserve Capacity Price and anticipated movements in that price over the contract term requested by the retailer. However, to date, retailers have opted not to contract with Alinta for any capacity credit shortfall to their IRCR.*" This statement appears to be in support of the argument that bilateral capacity is available at a reasonable market based price. However, an alternative view put by Landfill Gas and Power was that: "*LGP advises that its experience is that bilateral contracts are available but were priced so as to render uncompetitive the retail offerings of which they were to become a part. In particular, LGP has formed the view that the retail cost structure does not accommodate the "insurance premium" that parties with surplus capacity credits perceive is payable in order to facilitate avoidance of the SRC cost obligation.*"

Thus there seems to be mismatch between the price and value of capacity credits when a party seeking to buy capacity credits negotiates with a party carrying surplus. This demonstrates that trading of capacity credits under bilateral arrangements and the associated retail market pricing is not fully efficient. Such matters may not be fully resolved solely by the proposed Rule Change. They depend on retail pricing, the Administered Reserve Capacity Price, and the level of competition in the residual capacity market.

4.4 MMA's analysis

4.4.1 Support for the Rule Change

MMA supports the Rule Change as being consistent with supporting the WEM Market Objectives. However it does note that the rule change could be improved further, particularly to address competition and efficiency concerns in relation to the forecast error component of capacity shortfalls. MMA proposes consideration of a co-insurance fund to cap cost exposures, thereby reducing entry barriers in the retail market that may otherwise occur due to supplementary reserve capacity cost risk that is asymmetric with the size of a

retailers customer base. Another option would be to split the Supplementary Reserve Capacity Cost between the Targeted and Shared Reserve Costs as discussed below.

4.4.2 Qualification for forecast error

Further assessment of the treatment of scenario 4 with demand forecast error could be beneficial under the process for Rule Change 34. It would be desirable to target some of the supplementary capacity cost that is required to meet a forecast peak demand error to those retailers which have a deficit in their bilateral position. The deficit could be defined according to the load associated with new meters that had not been previously included in the original estimate of required reserve capacity. This would encourage retailers to manage the risk of higher growth and reduce the exposure to SRC overall. Thus might be achieved with a cap on distribution of the related SRC cost through the Targeted Reserve Capacity Cost with the balance going to the Shared Reserve capacity Cost, or funded by a coinsurance fund. The cap could be based on the Administered Reserve Capacity Price, perhaps plus a small risk premium to encourage contracting.

Such an amendment would mitigate the risk that some retailers may opt to contract below an efficient level, with the effect that resultant forecast error costs are transferred to other retailers and market customers. Market Objectives would be best achieved if retailers retained an incentive to manage their forecast risk, rather that this risk being shared across the market, and funded by others who may have fully contracted their position.

4.4.3 Coinsurance fund

Another way to deal with the potential excess costs of supplementary capacity might be to create a coinsurance fund that would pay out some or all of the cost when the Supplementary Reserve Capacity is activated. This would address the concerns of the smaller, uncovered retailers who would then not be faced with a potentially large payout if the cost of the Supplementary Reserve Capacity is large. The coinsurance pool may be funded by charging a small levy on retailers based on their capacity obligation (the IRCR). This will build up a reserve fund to pay for supplementary capacity for when it is needed. This arrangement would reduce retailer's exposure to large uncapped liabilities. Say for example, 100 MW for 20 hours at $10,000/MWh could be covered for one year by a $20 M fund. When the Funds builds up to a level that has a high probability of being sufficient for the next two years, the levy could be suspended. If over-collection occurs, refunds could be paid out. The fund could accrue investment earnings which would need to be distributed.

The disadvantage of such a scheme is that if it were too generous, it could provide a disincentive to retailers to procure bilateral capacity at an efficient level to manage the risk of additional demand growth. If it were poorly designed, it may also be costly to manage, diminishing some of the net benefit.

The further advantage is that it would reduce the risk profile of retailing and lower costs in the longer term.

4.4.4 Primary justification

The primary justification for the Rule Change is that facilitating new entry of small retailers while they are establishing their bilateral support will increase competition, reduce trading risk and therefore lower the cost of energy to retail customers. Spreading costs does not improve efficiency of itself, and it may encourage strategic behaviour that runs counter to a competitive market objective. The benefit for efficiency comes through maintaining and increasing competition.

Experience in many similar markets has also shown that an organised reserve capacity mechanism can provide a useful balancing service to the market, which can support the bilateral markets by providing opportunities for participants to trade out of rigid contract positions. This may also lower balancing costs by providing an alternative to bilateral contracting which can impose increasing transaction costs near the limit of peak load requirements because at this point, desired contract terms tend to become shorter and more flexible, especially when the retail market is contestable. The proposed rule change, with the suggested qualifications, can encourage an efficient level of contracting in the bilateral markets, whilst not disadvantaging those that may prefer the flexibility and economy that can be provided by an efficiently run reserve capacity mechanism.

4.4.5 Equity

Maintaining equity in the market is a fundamental principle that accompanies competition: all participants should face the same risks and rules as much as is possible within the basic economies of scale of the industry, and given the industry's notion of fairness.

To achieve such equity, distribution of the SRC cost should depend on the cause of the problem. Generators should first contribute to Supplementary Reserve Capacity Cost as compensation for plant failures or delayed installations, in effect returning capacity payments for capacity that is not available. The market generally can share the costs for small imbalances that may be considered a statistical anomaly or due to insufficient foresight by developers in planning new capacity.

Ideally, and assuming costs are efficient and manageable, SRC cost arising from forecast error should be distributed only to those retailers that do not have spare bilateral cover relative to their actual temperature adjusted peak demand. This would enable retailers to manage their own forecast risk if they wish to do so. It also means that retailers that are managing their forecast risk by fully contracting are not required to subsidise those that are not.

However, given potential difficulties in contracting bilaterally where there is limited competition, it may be the case that SRC cost is higher than what it would otherwise be, presenting an argument that this excess cost associated with forecast error (or the full cost if the alternative is not practical or feasible in the short-term) should be recovered through the shared mechanism, or capped via the use of a coinsurance fund. This would therefore be a compromise solution that would assist the achievement of the market objectives, but

which could be further improved when a way is formulated that can distribute some or all of the costs of forecast error to those market customers which have the increased demand associated with a forecast error.

4.4.6 Risk of insolvency for less well established retailers

The risk to less well established retailers is considerable under the current rule and makes for uneven competition. Rule Change 27 lowers the insolvency risk margin for small retailers.

4.4.7 Retail competition and market power

Facilitating new entry of small retailers while they are establishing their bilateral support will increase competition, reduce trading risk and thereby lower the cost of energy to retail customers. In particular, reducing the relationship between bilateral contracting and SRC exposure gives more time to negotiate favourable contracts.

Spreading costs improves competition by making the playing field more level and reducing the minimum efficient scale for market participation.

Unnecessary insolvency risks introduce other barriers to efficient transactions in all related markets (finance, energy, ancillary services) and therefore undermine competition in a broader sense.

4.4.8 Reliability

The current Rules may encourage over-contracting and hence may increase reliability above the desired level of industry, as prescribed by the Market Rules. On the other hand the unnecessary insolvency risks also serve to undermine reliability by diverting resources from the supply chain (gas supply, power station operations and level of service generally), and by raising the risk that all of an affected participant's contracts may fall-over, affecting service delivery in all of the markets that it operates within. However, spreading the cost of the Supplementary Reserve Capacity regardless of the level of capacity contract cover is likely to undermine the incentive to contract capacity and thus may reduce the level of reliability closer to the minimum standard.

4.4.9 Availability of bilateral capacity

A straw poll taken at the meeting by the chairman with a show of hands and all other eyes closed indicated that two participants had sought capacity that was available, but that it had a cost that did not make their business viable and so they had declined to accept it on the terms offered. This suggest that the issue concerning the availability of bilaterally contracted capacity it is not so much about the availability of capacity but that less well established retailers may not be able to access this remaining capacity at a competitive price or on reasonable terms. They may not be able to negotiate a capacity price that is favourable relative to the value of the wholesale electricity supply for their existing or prospective retail customers.

This condition can occur when there is insufficient competition in the supply of the remaining capacity which is quite likely in a small market. Certainly, if the remaining capacity was held by a vertically integrated utility, then it would not be expected that it would sell surplus capacity without a premium added above the value it has for its own retail sales. A rational seller of capacity would not wish to undermine its own retail position by selling capacity at a cost which enables another party to reduce its own retail sales. Thus the argument by Alinta that capacity is available is not a sufficient justification for continuing with the current rule about SRC cost distribution. The fact is that it is likely that there is market power in the market for remaining capacity, having the outcome that the distribution of SRC costs may be inequitable, above an efficient level, and therefore also detrimental to competition generally.

Irrespective of competition issues in the market for remaining capacity, it could also be the case that the efficient price includes a margin to address the avoided cost of an excessive cost risk (and potential insolvency risk) should the participant find itself short of capacity given the current rules. In this case capacity costs, although efficient when assessed within the definition of the existing Market Rules, may be higher than what they would be the case under the proposed rules, given that they are inflated by cost artefacts that are a feature of the market design, and that are not related to the structural costs of managing physical plant or infrastructure. In this case inefficient market rules may be inflating costs in the contract market.

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5 CONCLUSIONS

MMA concludes that the proposed Rule Change does support the Market Objectives, especially in relation to support for retail competition. The associated Rule Change 34 process will deal with the recovery of supplementary capacity costs from generators where appropriate.

This Rule Change 27 could be made more efficient and equitable by means of further consideration to the distribution of supplementary capacity costs related to forecast error. For example, some portion of the costs should be distributed to those retailers which have not fully covered their increased demand by means of bilaterally contracted capacity credits. This direct distribution could be based on demand associated with new meters and be capped to protect less well established retailers.

If a cap is considered desirable, the industry could consider the development of a coinsurance reserve fund. Under such as scheme all customers could be levied a small fee to build a pool of funds that could be used to buy supplementary capacity when needed, or to cap excessive Supplementary Reserve Capacity Cost. Any deficits in that fund could be recovered from the Shared Reserve Capacity cost when needed. This would smooth the cash flow associated with SRC over time and reduce financial risk for less well established retailers.

These arrangements would provide better incentives for retailers to manage the uncertainty of the demand of their customers and smooth the cash flows associated with purchase of supplementary capacity to cover forecast error.

However, these other alternatives would be more complicated and more costly to manage and monitor. Therefore MMA supports the current proposal as a way forward initially.

APPENDIX A ANALYSIS OF SUBMISSIONS

This appendix reviews the submissions in Table A- 1 and presents a comparison of the overall consensus of submissions and the response by the IMO and MMA in Table A- 2. The Perth Energy submission following the Public Workshop is included.

Table A- 1 Analysis of submissions

Proposition on Market Impact of Change	Griffin	Alinta	Land Fill Gas and Power	Perth Energy	Synergy
Overall support for Rule Change 27	Supported but didn't necessarily agree with assessment in relation to market objectives.	Does not agree with the Rule Change or that it would promote the Market Objectives. Supports further work to address the issues.	Supported	Strongly supports the proposed change to share the costs.	Supported
Primary justification	On balance it is sensible to prevent market failure and improve the long term function of the market rather than applying strict market efficiency principles.	Disincentive to bilateral contracting. Undermines the value of Alinta's portfolio.	Risk of bankrupting a small retailer which would share the cost of default among the other participants anyway. Market power afforded to the remaining supplier of available capacity credits	The costs of SRC are so high as to place smaller market participants at extreme risk.	Efficiency is promoted by sharing the cost of SRC and competition is promoted by creating a more level playing field by correcting the inequitable treatment.

Proposition on Market Impact of Change	Griffin	Alinta	Land Fill Gas and Power	Perth Energy	Synergy
In relation to equity among market customers	Large incumbent retailers are better able to manage SRC cost risk.	All retailers have the option to contract bilaterally and avoid SRC risk. Didn't agree that retailers could not buy capacity under bilateral contracts.	Removes the manifest error that makes some retailers liable for funding the SRC for the market as a whole	The current allocation of SRC is inequitable especially where a vertically integrated retailer has caused the capacity shortfall and is otherwise not exposed to the SRC cost.	Current Rule does not appear to be equitable. Distribution of costs of SRC does not match the distribution of benefits. Inequity is greatest for plant failure and forecast error where the retailer has no influence.
The risk to less well established retailers	Greater risk of bankruptcy.	Is mitigated by bilateral long-term contracting. Under current arrangements all retailers can shield themselves from SRC exposure. Alinta can provide capacity credits.	Current scheme has the risk of bankrupting small retailers.	Very extreme financial risk from high SRC costs.	Current rule unfairly targets some market customers.

Proposition on Market Impact of Change	Griffin	Alinta	Land Fill Gas and Power	Perth Energy	Synergy
The impact on competition in the retail market and market power generally	Large incumbent retailers are better able to manage SRC cost risk and therefore have a competitive advantage. The Rule Change improves the long term function of the market which aids competition among retailers and results in lower long term cost of electricity to customers.	Long-term bilateral contracts and generation investment provides insurance against SRC cost exposure and maximises market competition. Socialising the SRC cost impedes and severely diminishes incentives for efficient behaviour which is assumed to be indicated by long-term contracting with capacity.	Encourages competition by reducing exposure to uncontrollable and uncapped liabilities. Under current scheme, market power is afforded to the remaining supplier of available capacity credits when retailer wishes to reduce exposure to SRC cost.	No addressed explicitly. Implied by the risk to smaller retailers.	Encourages competition by correcting the inequitable treatment.

Proposition on Market Impact of Change	Griffin	Alinta	Land Fill Gas and Power	Perth Energy	Synergy
Effect on market efficiency	Efficient markets often lead to participant failure. The Rule Change 27 does not support market efficiency because it discourages efficient market behaviour by reducing the risk of participant failure. Competition leads to lower long term cost of electricity.	Long-term bilateral contracts and generation investment provides insurance against SRC cost exposure and maximises market efficiency.	Spreading the SRC cost promotes efficiency	No comment	Spreading the SRC cost promotes efficiency.
In relation to reliability	The current arrangements do not manage reliability in an efficient manner	No comment.	No comment.	No comment	No comment.

Table A- 2 Consensus of submissions and IMO/MMA analysis

Proposition on Market Impact of Change	Consensus of Submissions	IMO	MMA
Overall support for Rule Change 27	Supported but participants didn't always agree with assessment in relation to market objectives. Alinta does not agree with the rule change and requires more assessment of the options.	Proposed the Rule Change based on Working Group discussions. Requires Rule Change 34 to be fully implemented.	Supported with further assessment of the treatment of scenario 4 with demand forecast error under Rule Change 34. This amendment would mitigate the risk of under-contracting by retailers, to leave financial capacity to pay for the risk of shared SRC cost. It would be better for retailers to contract bilaterally to manage forecast risk and reduce exposure to SRC cost for forecast error. A coinsurance scheme to support the cost of supplementary capacity may be a suitable alternative to recover the excess costs.
Primary justification	The inequity of the current arrangement, the undue risk of bankrupting small retailers and ensuring fair competition are the primary justifications for the change.	Remove the inequity and improves efficiency by spreading costs.	Facilitating new entry of small retailers while they are establishing their bilateral support will increase competition, reduce trading risk and thereby lower the cost of energy to retail customers. Spreading costs does not improve efficiency of itself. The benefit for efficiency comes through competition.

Proposition on Market Impact of Change	Consensus of Submissions	IMO	MMA
In relation to equity among market customers	Large incumbent retailers are better able to manage SRC cost risk. Removes the manifest error that makes some retailers liable for funding the SRC for the market as a whole. Distribution of costs of SRC does not match the distribution of benefits.	Corrects the potential inequity on retailers without full bilateral cover.	Distribution of the SRC cost should depend on the cause of the problem. Generators should first contribute for plant failures or delayed installations. The market generally can share the costs for small imbalances that may be considered a statistical anomaly. SRC arising from forecast error should be distributed only to those retailers that do not have spare bilateral cover relative to their actual temperature adjusted peak demand. This would enable retailers to manage their own forecast risk if they wish to do so. If the Shared Reserve Capacity Cost mechanism is used to recover forecast error related costs, it may have the effect of shifting cost liabilities in an inequitable manner, requiring fully contracted participants to subsidise those that may have intentionally or strategically contracted below an efficient level.
The risk to less well established retailers	Current scheme has the risk of bankrupting small retailers. Current rule unfairly targets some market customers.	Considerable under the current arrangements. Risk would be markedly reduced under the Rule Change 27.	Considerable and makes for uneven competition. Rule Change 27 lowers the insolvency risk margin for small retailers.

Proposition on Market Impact of Change	Consensus of Submissions	IMO	MMA
The impact on competition in the retail market and market power generally	Large incumbent retailers are better able to manage SRC cost risk and therefore have a competitive advantage. The Rule Change improves the long term function of the market which aids competition among retailers and results in lower long term cost of electricity to customers. Under current scheme, market power is afforded to the remaining supplier of available capacity credits when retailer wishes to reduce exposure to SRC cost.	Encourages competition among retailers and removes inequitable treatment for some retailers. Some retailers would be better able to compete for customers because their risks are reduced by the Rule Change.	Facilitating new entry of small retailers while they are establishing their bilateral support will increase competition, reduce trading risk and thereby lower the cost of energy to retail customers. Reducing the relationship between bilateral contracting and SRC exposure gives more time to negotiate favourable contracts. Spreading costs improves competition to a certain extent by making the playing field more level and reducing the minimum efficient scale for market participation. Unnecessary insolvency risks introduce other barriers to efficient transactions in all related markets (finance, energy, ancillary services) and therefore undermine competition in a broader market sense.

Proposition on Market Impact of Change	Consensus of Submissions	IMO	MMA
Effect on market efficiency	Long-term bilateral contracts and generation investment provides insurance against SRC cost exposure and maximises market efficiency.	Spreading the SRC cost promotes efficiency. Ensuring that an oversupply of capacity credits does not systematically eventuate.	Current arrangements potentially encourage inefficient contracting by forcing buyers into the bilateral market when the least cost solution may be to rely on the balancing qualities of the reserve capacity mechanism. The current arrangements allow retailers to trade out of inflexible contract positions which means they are better able to operate efficiently in a dynamic retail market. As the levels of expected peak load are approached, bilateral contracting can become more costly. The optimal contracts are shorter term and more flexible in duration and volume; they are therefore less standard, raising the transaction costs related to negotiation, evaluation and management. Under current Rules, smaller retailers would have to include a risk margin within their retail contracts to accommodate uncertain costs associated with SRC. The current premise for retail contracts typically assumes that retailers have known and manageable costs. Unnecessary insolvency risks introduce other barriers to efficient transactions in all related markets (finance, energy, ancillary services).

Proposition on Market Impact of Change	Consensus of Submissions	IMO	MMA
In relation to reliability	The current arrangements do not manage reliability in an efficient manner	Minimises the risk of excessive reliability.	The current Rules may encourage over-contracting and hence increase reliability. On the other hand the unnecessary insolvency risks serve to undermine reliability by diverting resources from the supply chain (gas supply, power station operations and level of service generally). In the event of insolvency, all contracts may fall over, affecting expectations of service reliability in a broader market sense.