Policy responses to mitigate the risk of financial contagion in the NEM

A REPORT PREPARED FOR THE AUSTRALIAN ENERGY MARKET COMMISSION

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1 Introduction

1.1 Background

The Australian Energy Market Commission (AEMC) is presently undertaking a review of the financial market resilience of the National Electricity Market (NEM). The review is considering measures to mitigate the risks of financial instability in the NEM. As an input to its analysis, the AEMC has asked Frontier Economics to provide advice on ways to improve the resilience of the market to the failure of a large electricity retailer (or vertically-integrated 'gentailer'). Such a participant – along with other types of large market participant – is likely to fall within the category of a 'systemically important market participant' or 'SIMP'. While the advice we have provided in this report is focused on managing the impacts of a large retailer failure, our analysis and recommendations could be applied more broadly, to circumstances of all retailer failures.

Ultimately, part of the reason why retailer financial failure can arise in the NEM – although in practice it has occurred very rarely – is attributable to the highly volatile and asymmetric pattern of wholesale spot prices. Most of the time, spot prices remain below $300/MWh and they average $40-80/MWh in most regions at most times. However, spot prices can range from the market floor price of -$1,000/MWh to the market price cap (MPC) of $13,100/MWh. Meanwhile, retailers supply most of their customers at prices that are fixed or time-varying to only a limited extent. Even where retail tariffs are time-varying, they are seldom linked to wholesale spot prices. This means that retailers are required to manage the risk of an input with a highly volatile price while supplying an output with a more-or-less fixed price. It is this juxtaposition between volatile input prices and relatively stable output prices that gives rise to the risk of sudden retailer failure, and consequently, the need for retailers to provide credit support to the Australian Energy Market Operator (AEMO) and to Distribution Network Service Providers (DNSPs).

Most retailers manage their wholesale energy purchase cost risks by either vertically integrating into electricity generation activities or by entering into derivative contracts that hedge their spot purchases. That is, retailers typically seek to either obtain a *physical* hedge to spot prices (ie vertical integration) or a *financial* hedge (by entering derivative contracts). Some form of hedging is important because of the highly asymmetric distribution of spot prices. An unhedged retailer may profit for long periods of time by purchasing electricity at the wholesale spot price and selling electricity to its customers at a higher price while avoiding hedging costs. But if and when spot prices rise to more than 100 times typical prices for any length of time, such a retailer can suffer substantial losses in a very short space of time.

While large (or small) retailers are unlikely to hold a completely unhedged retail position in the NEM, they may nevertheless face the risk of being temporarily and involuntarily *effectively* unhedged in circumstances where:

- An OTC counterparty generator experiences a large and prolonged outage (or was prevented from being dispatched due to a transmission outage) that reduces its ability to make difference payments on hedging contracts.
- Generating assets owned by (or transmission network assets used by) a vertically-integrated large gentailer experience a prolonged outage (as above).
- The retailer has acquired derivative contracts settled against spot prices in other regions and either did not acquire Inter-Regional Settlement residues (IRSRs) to hedge basis risk or the IRSRs prove to be less than fully firm.

Some of these possibilities were canvassed in the AEMC's Issues Paper.[1]

In the event of any retailer failure in the NEM,[2] the retailer of last resort (RoLR) provisions of the National Electricity Retail Law (NERL) will be triggered. These provisions oblige AEMO to transfer the customers of the failed retailer to one or more 'designated RoLR(s)'. If the failed retailer is a large retailer, the effect of transferring its customers may cause the retailer receiving those customers to itself suffer financial stress and eventual failure, leading to a cascade of retailer failures and suspensions. This may be described as a 'financial contagion'.

1.1.1 First Interim Report options and recommendations

The AEMC considered a number of options for addressing financial risks from a large retailer failure in its First Interim Report for the Financial Resilience Review.[3]

The First Interim Report made two broad types of recommendation:

- A last resort government response – in the form of:
  - An ability for the government to post credit support to meet the designated RoLR's increased credit support obligations for an initial period following a RoLR event; and
  - A 'Special Administration Scheme' as an alternative to the operation of the RoLR arrangements. Under the Scheme, an administrator would be appointed to manage the transition of the failed retailer's customers to other retailers. The government would provide interim funding to enable the failed retailer to continue to operate during this period.

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1 AEMC, *NEM financial market resilience, Issues Paper*, 8 June 2012 (Issues Paper), section 5.

2 Except in Victoria and Queensland, which have not yet implemented the NECF.

3 AEMC, *NEM financial market resilience, First Interim Report*, 4 June 2013 (First Interim Report).

- A number of incremental or interim changes to the RoLR arrangements and the AEMO credit support requirements – in the form of:
  - Amending the NERL to provide greater certainty to the RoLR that it can recover its reasonable costs of undertaking its RoLR obligations.
  - Delaying designation of RoLRs by approximately two and a half days to give the Australian Energy Regulator (AER) a greater opportunity to assess the scope for appointing multiple RoLRs.
  - Amending AEMO credit support provisions by providing designated RoLRs with a one week 'period of grace' in relation to increased credit support obligations and then increasing credit support requirements in increments over a four week period.

The First Interim Report also considered and rejected a number of incremental options, including:

- Enhancing existing RoLR provisions to assist the AER to better prepare for a large retailer failure and facilitate the appointment of multiple RoLRs.
- Transferring hedge contracts to the designated RoLR to assist the RoLR manage its increased exposure to wholesale energy purchase costs.
- Amending RoLR event triggers to delay the triggering of a RoLR event.
- Waiving or reducing DNSP credit support provisions for a transitional period.
- Imposing a spot market price cap (eg $300/MWh) for a period of time following a retailer failure, potentially applicable only to the designated RoLR.
- Allowing the RoLR to pay AEMO a reduced price for wholesale energy purchases for a transitional period.
- Delaying the settlement period for a designated RoLR to pay AEMO for energy consumed by its new customers.
- Delaying the settlement period for a designated RoLR to pay DNSPs for network charges in respect of its new customers.
- Creation of an industry co-insurance fund to provide loans or grants to the designated RoLR.

1.1.2 Options considered in this report

This report takes as given the incremental changes recommended in the First Interim Report and considers any further changes that could be implemented via the NERL or the National Electricity Rules (NER) that could help reduce the risks of financial contagion in the NEM. While some of these options were considered (in a form) and rejected in the First Interim Report, the AEMC is

examining them again with the objective of making the RoLR regime more robust and to manage the smooth transfer of customers with a reduced risk of financial contagion in a broader range of circumstances.

The options assessed in this report are as follows:

1. Excluding 'large' or 'very large' customers from the RoLR regime.
2. Temporarily waiving the requirements for the RoLR to post credit support to DNSPs in respect of new customers attributable to the RoLR event.
3. Temporarily waiving – beyond the changes recommended in the First Interim Report – the requirements for the RoLR to post credit support to AEMO in respect of new customers attributable to the RoLR event.
4. Temporarily reducing the Market Price Cap (MPC) and/or the Cumulative Price Threshold (CPT).
5. Further clarifying RoLR cost recovery provisions to reduce the financial exposure of the RoLR.
6. Imposing a form of monitoring of the additional RoLR to minimise moral hazard risks from a relaxation of prudential requirements

Many of these options could be adopted in combination. Most, such as further clarifying cost recovery arrangement, would be desirable in advance of any retailer failure. Others, such as reducing the MPC, should we believe only be contemplated (if at all) in the circumstances of a large retailer failure.

The options must be assessed having regard to the National Energy Retail Objective (NERO), which is to promote efficient investment in, and efficient operation and use of, energy services for the long term interests of consumers of energy with respect to price, quality, safety, reliability and security of supply of energy. Given its similarity to the National Electricity Objective, which emphasises economic efficiency, we interpret the NERO to require consideration of the overall economic welfare impacts of an option.

More specifically, the options need to be assessed having regard to the following criteria:

- The effectiveness of the option to diminish the financial impacts on the market of a large retailer failure.
- The influence on the behaviour of market participants in the short and long terms.
- The value of allocating risk to the party(ies) best able to manage that risk.
- The impact on investment incentives.
- The certainly provided to market participants.
- The effects on end-use retail customers of electricity.

1.2 About the rest of this report

This report is structured as follows:

- Section 2 describes the current operation of the existing RoLR regime.
- Section 3 outlines the scenarios to be considered in assessing the options, where relevant.
- Section 4 provides a table summary of our analysis and recommendations.
- Section 5 considers the option of excluding large customers from the RoLR regime.
- Section 6 considers the option of temporarily waiving DNSP credit support requirements.
- Section 7 considers the option of temporarily waiving AEMO credit support requirements.
- Section 8 considers the option of temporarily reducing the MPC and/or CPT.
- Section 9 considers the option of further clarifying RoLR cost recovery provisions.
- Section 10 considers the option of imposing a form of monitoring of RoLRs.

2 Operation of the RoLR regime

2.1 Obligations imposed under the regime

As noted in section 1, the NERL provides for the appointment of a 'retailer of last resort' (RoLR) if a retailer is suspended from the NEM. The failed retailer's customers are transferred to the RoLR and the RoLR becomes the financially responsible person in respect of those customers.

These obligations placed on RoLRs to whom customers of a failed retailer are transferred include:

1. The provision of additional credit support to AEMO reflecting the increased customer load being served by the RoLR – this is generally required within 1-2 days.
2. The provision of additional credit support to DNSPs reflecting the increased network charges likely to be outstanding at any time – this is required within ten business days of a request from the DNSP.
3. Increased wholesale electricity purchase costs in respect of the load of the transferred customers.
4. Relatedly, costs associated with replacing any over-the-counter (OTC) derivative contracts entered into with the failed counterparty.

The RoLR arrangements were motivated by two concerns:

- Maintaining the financial integrity of the wholesale NEM in the event of retailer failure and
- Providing price protection for small retail customers transferred in a RoLR event.

The financial integrity of the NEM would be at stake in the absence of RoLR provisions because in the event of a retailer failure, AEMO – and by extension, generators and the market as a whole – would be exposed to non-payment for the wholesale electricity purchased by that retailer on behalf of its customers. Furthermore, such events are most likely to occur at times when wholesale spot prices have been high due to extreme demand and/or plant or network contingencies, increasing the gravity of risk exposure.

While the NEM arrangements provide for disconnection of the customers of the failed retailer,[4] this could not happen quickly enough to avoid the accrual of large amounts of unpaid electricity purchases. Moreover, because end-use customers would still be financially capable and willing to pay for their power consumption,

4 See NER clause 3.15.21 and NEL section 63.

disconnecting these customers because their retailer failed would be a tremendously harmful, perverse and inefficient exercise, as those customers would ultimately seek to reconnect with the aid of a new retailer and would have foregone valuable power consumption in the interim. The RoLR arrangements address this problem by enabling AEMO to transfer a failed retailer's customers to the RoLR, who then becomes responsible for the costs of serving the transferred customers.

The RoLR arrangements provide price protection to small electricity customers because the amount the small customers pay their RoLR for electricity is the same as the regulated or standing offer tariff in the relevant jurisdiction. The policy driver for this requirement was to ensure that small customers were not materially affected by the failure of their retailer. This was originally to promote consumer confidence in retailer choice at the outset of Full Retail Competition (FRC) in the early 2000s.

2.2 Implications of large retailer failure

All the large electricity retailers in the NEM presently act as the 'default RoLR' in at least one NEM jurisdiction. The default RoLR is the retailer to whom a failed retailer's customers will be transferred if the AER does not appoint another retailer to become the 'designated RoLR' before the RoLR event takes place. The only retailer that could reasonably be described as a 'large retailer' in a particular jurisdiction but is not a default RoLR in that jurisdiction is AGL in NSW.

Importantly, while the AER is required to seek expressions of interest from retailers to register as RoLRs, registration is not a prerequisite for the AER to appoint a retailer as a default RoLR.[5] However, the AER must consult with a retailer prior to appointing it as a default RoLR and the AER must be satisfied that the retailer it appoints as a default RoLR either satisfies various technical and financial criteria or is the retailer that most nearly satisfies the financial criteria.

In addition, the AER may appoint one or more 'additional RoLRs' from those retailers that have submitted expressions of interest to be RoLRs.[6] The AER has published a Statement of Approach that sets out the process it intends to follow, *inter alia*, for the appointment of additional RoLRs and the designation of RoLRs.[7]

If a large retailer who is also a default RoLR is suspended by AEMO, there will be no retailer to whom customers of the default retailer can be automatically

5 NERL section 125.

6 NERL, section 126.

7 AER, *Retailer of Last Resort statement of approach*, November 2011 (Statement of Approach), section 3.4.

transferred.[8] However, the AER may appoint another retailer as RoLR *before* the RoLR event occurs.[9] In anticipation of these circumstances, the AER has noted that it would need to advise AEMO in advance which remaining default or additional RoLRs should be appointed as the designated RoLR(s) in the event of the failure of a default RoLR.[10] We are not aware whether the AER has provided such advice to AEMO or whether the AER and AEMO have established a protocol whereby AEMO would give advance warning to the AER of an impending RoLR event to allow the AER to formally appoint another retailer as the designated RoLR prior to the default RoLR succumbing to the RoLR event.

In any case, the new designated RoLR(s) would then be in the position of needing to comply with a range of obligations attached to being a retailer of a large number of customers in the NEM. For example, the designated RoLR would be required to provide credit support to AEMO and to DNSPs, as well as being exposed to wholesale electricity purchase cost risks in respect of a large and unanticipated volume of new retail load. These obligations are likely to impose substantial financial burdens on a RoLR and potentially put it in a distressed financial state itself.

If a new designated RoLR itself was unable to meet its financial obligations, then it would be at risk of suspension from the market. If this occurred, a number of events would follow over the succeeding days and weeks:

- AEMO would call on the credit support the designated RoLR had already provided, which should cover at least the RoLR's outstandings to the date of its suspension in respect of its original customer load (ie excluding the outstandings attributable to transferred customers of the failed retailer).
- To the extent the RoLR's credit support was insufficient to cover the RoLR's total outstandings, there would be insufficient funds to complete settlements and generators would be short-paid.[11]
- DNSPs would call on the credit support the RoLR had provided to them, with any short-falls to be later recovered from their customers.

In response, the AER would be obliged to designate another RoLR. The result could be a financial contagion, in which multiple retailers fail sequentially. At the limit, financial contagion could result in all the retailers within the entire NEM potentially being suspended.

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8 This is because under NERL sub-section 125(2), each connection point can only have one default RoLR.

9 NERL section 132.

10 Statement of Approach, pp.9-10.

11 First Interim Report, p.73.

3 Scenarios for assessing options

In order to assess the further changes that could be implemented to reduce the risks of financial contagion from large retailer failure, it is necessary to construct appropriate scenarios in which the potential options could be activated. The options can then be assessed by comparing, in each scenario, two 'states of the world':

- A state of the world in which the option is not implemented and
- A state of the world in which the option is implemented.

This section discusses the key scenarios to be considered.

The AEMC's Issues Paper considered some of the ways in which a financial contagion could arise in the NEM. It focused on potential contagion from a generator to a retailer and from a retailer to another retailer. In general, the financial risks from a contagion episode ultimately stem from a retailer's lack of *effective* hedging against high wholesale spot prices in respect of the retailer's energy purchases on behalf of both:

- the retailer's existing customers, as well as
- any additional customers the retailer acquires by virtue of a previous retailer failure and the operation of the RoLR regime to transfer those customers to the retailer in question.

A retailer's lack of *effective* hedging can arise in a number of ways. Indeed, virtually any retailer in the NEM can be vulnerable to wholesale purchase price risk in the event of certain contingencies. For example, a standalone retailer may choose to retain a 'short' exposure to wholesale spot prices (meaning that it benefits if spot prices are lower than expected) by deliberately 'under-hedging' itself. Alternatively, a standalone retailer may have entered sufficient financial contracts to hedge its expected load, but its actual load may far exceed its expected load and this may occur at precisely those times when spot prices are high. Such a retailer would be inadvertently short wholesale electricity. Even a standalone retailer that has entered into sufficient OTC hedge cover to meet its load under virtually all circumstances may be financially exposed to spot prices if its counterparty fails. A vertically-integrated retailer-generator ('gentailer') may also be vulnerable to high spot prices if it is naturally short generation at peak demand times. A gentailer may also be exposed to wholesale price risk if its generator suffers an outage or is constrained-off due to a transmission outage or binding constraint.

Under conditions of high wholesale prices, it is quite possible that a small retailer will fail before a large retailer fails. If this happens, a large retailer that is a designated RoLR may have *already* had the customers of smaller retailers transferred to it before it fails. Indeed, the increased financial obligations arising

from being designated as the RoLR to a failed small retailer may instigate the failure of a large retailer. This means that testing the robustness of options to prevent financial contagion from the failure of a large retailer should not focus exclusively on the current market shares of large retailers in the NEM. By the time a large retailer fails, it may have accumulated a significantly larger market share due to its RoLR status to a number of smaller failed retailers' customers.

Therefore, we consider that the robustness of options to maintain the financial resilience of the NEM given the failure of a large retailer ought to be assessed under three scenarios:

- **Scenario 1:** Failure of a retailer with a market share (of consumption) across the NEM and in each region of 20% and the equal allocation of that retailer's customers to two other retailers also with market shares of 20% each (ie all three retailers are originally the same size). All other retailers are assumed to be smaller. This would represent a notional increase in the size of the two designated RoLRs' customer loads of *approximately 50%*. This scenario also assumes that the Standard & Poor's credit rating of the two designated RoLRs is BBB-, this being the threshold for investment grade debt. By way of example, the present Standard & Poor's credit ratings of the three large gentailers in the NEM are BBB for AGL and Origin Energy (the latter has been given a negative outlook) and BBB- for EnergyAustralia (also with a negative outlook).
- **Scenario 2:** Failure of a retailer with a market share (of consumption) across the NEM and in each region of 30% and the equal allocation of that retailer's customers to two other retailers with market shares of 15% each. All other retailers are assumed to be smaller. This would represent a *notional doubling* in the size of designated RoLRs' customer loads. This scenario also assumes that the Standard & Poor's credit rating of the two RoLRs is BBB-.
- **Scenario 3:** Failure of a retailer with a market share (of consumption) across the NEM and in each region of 30% and the entire allocation of that retailer's customers to one other retailer with a market share of 15%. All other retailers are assumed to be smaller. This would represent a *notional tripling* in the size of the designated RoLR's customer load. This scenario also assumes that the Standard & Poor's credit rating of the RoLR is BBB-.

These scenarios are not intended to reflect the actual market shares of any NEM retailers. In some respects, the market shares will not adequately capture the dominance of a retailer in a particular region. For example, AGL in South Australia has a market share of small customers and consumption of well over 30%. This means that the above scenarios could lead to an understatement of the potential increase in a new RoLR's DNSP credit support obligations in a particular jurisdiction from the failure of a large retailer. However, across the NEM as a whole, the second and third scenarios especially should provide some reasonably realistic worst-cases for both (i) estimating the RoLR-related stresses

placed on remaining retailers in the event of a large retailer failure and (ii) illustrating the benefits of appointing multiple back-up RoLRs in these circumstances.

Scenarios for assessing options

4 Summary of analysis and recommendations

Based on the scenarios and states of the world outlined above, our analysis of the options is summarised in Table 1 below.

Table 1: Summary of analysis and recommendations

Option	Advantages	Disadvantages	Recommend?
1: Exclude large customers from RoLR	May reduce RoLR's wholesale purchase cost risks and credit support obligations to AEMO and DNSPs	Hard to operationalise without creating disconnection risk May ultimately have little impact	No - but perhaps oblige retailers to notify very large customers that if they do not nominate a RoLR, they will be exposed to the risk of spot price pass-through
2: Postpone DNSP credit support	Reduces pressure on RoLRs' cash-flows – hence could prevent financial contagion Not a benefit of the option, but note that under all Scenarios, retailers ultimately collectively provide more credit support than prior to the RoLR event: * Scenario 1: $0 before, $372m after * Scenario 2: $186m before, $372m after * Scenario 3: $186m before, $536m after	In all Scenarios, this option temporarily increases DNSP and end-use customer risks compared with the base case Does not address higher wholesale purchase cost risks	Yes – extent of deferral should be based on time needed to negotiate new AEMO credit support arrangements (see Option 3 below)
3: Further postpone AEMO credit support	Reduces pressure on RoLRs' cash-flows – hence could prevent financial contagion Delay may enable RoLRs to negotiate more competitively-priced credit support	Temporarily increases exposure of AEMO and generators to RoLRs' finances Does not address higher wholesale purchase cost risks	No – in most cases, the extent of deferral recommended in the First Interim report should be sufficient to enable RoLRs to procure additional credit support on reasonable terms
4: Temporarily reduce MPC and/or CPT	Directly reduces RoLRs' energy purchase costs, which reduces pressure on RoLRs' cash-flows Indirectly reduces RoLRs' energy purchase costs by deterring exercise of transient pricing power Indirectly reduces RoLR's AEMO credit support requirements	Could reduce incentives for retailers to enter hedge contracts, especially caps Could deter peaking generators from offering capacity during tight supply-demand periods Could deter hydro generators from offering power during tight	No – cons outweigh pros, but could achieve some of the benefits by deferring NEM settlements in respect of spot prices > 2*APC ($600/MWh), although that has other drawbacks

Option	Advantages	Disadvantages	Recommend?
	Accordingly, may reduce risk of financial contagion In case where retailer failure caused by generator default on contracts, could bring financial outcomes closer to what would happen if generator did not default	supply-demand periods Could jeopardise NEM reliability standard in the long term by deterring generation investment beyond current impact of APC	
5: Further clarify RoLR cost recovery	If AER makes interim determination on costs, could help RoLRs to meet cash-flow needs If cost recovery framework clarified, will avoid discriminating against customers of small retailers Provides large customers with incentives to enter a new retail contract	Risk of RoLR 'front-loading' costs if cost recovery only allowed for 3 months following RoLR event Lack of time frame for AER to make cost determination extends period of generator and retailer risk exposure	Yes – further clarify cost recovery to: * Allow RoLR to recover RoLR-related costs up to 3 months following transfer * Allow RoLRs to apply for interim cost determination * But no fixed timeframe for AER to make final determination * All ongoing RoLR costs related to small customers should be recovered through DNSP charge * Ongoing RoLR costs related to large customers should be recovered from large customers * Administrative costs should be recovered through DNSP charge Amend NER 3.3.8 to ensure that greater certainty around cost recovery feeds into the methodology for determining prudential settings
6: AER monitoring of RoLRs	Reduces risks from adopting other options that reduce cash-flow imposts on RoLRs Gives AER opportunity to comment or object to particular decisions, which may provide RoLR with some comfort	Invites AER intrusion into RoLRs' decisions AER may lack skill, resources or interest in monitoring	No – cons strongly outweigh pros

Source: Frontier Economics.

Summary of analysis and recommendations

5 Option 1: Exclude large customers from the RoLR regime

5.1 Outline

This option involves excluding either 'large' or 'very large' customers from the operation of the RoLR regime and the benefits of RoLR protections. 'Large' refers to customers consuming more than 100 MWh of electricity per annum.[12] 'Very large' is not a defined term in the NEM arrangements, but could be used to describe customers who are either directly connected to the transmission network or consume, say, in excess of 100 GWh per annum (ie the upper threshold for customers with Type 3 meters) or 1 TWh per annum (ie the upper threshold for customers with Type 2 meters).

The key criterion for choosing an appropriate consumption or size threshold for defining very large customers should depend on precisely the form of the option that is proposed:

- If the option under consideration is the entire exclusion of large customers from RoLR protections – which may result in disconnection of such customers – then it would be appropriate for the size criterion to be chosen such that it results in few enough customers to be feasibly disconnected by the applicable DNSP following a RoLR event within a suitably short period of time – such as one week.
- If the option under consideration involves imposing an obligation on such large customers to nominate a RoLR in advance rather than being transferred automatically to the same RoLR as operating for smaller customers, then it would be appropriate for the size criterion to be chosen on the basis of whether the customer is likely to have sufficient expertise to understand the nature and implications of its nomination.

In either case, this option would apply regardless of the size of the failed retailer.

5.2 Existing large customer RoLR protections

Financially failing retailers in the NEM will have customers that consume different amounts of electricity. Under the NERL, 'small customers' transferred to a RoLR are entitled to be charged the retailer's standing offer tariff, subject to variations made in accordance with the cost recovery provisions in Division 9.[13]

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12 *National Energy Retail Law*, sections 5 and 6; *National Energy Retail Regulations*, sections 7 and 8.

13 NERL, section 145.

Conversely, 'large customers' are charged tariffs published by the designated RoLR on its website, which need only be 'fair and reasonable'.[14] In its First Interim Report, the AEMC observed that fair and reasonable could mean "the pass through of spot market prices, plus a margin, as is explicitly permitted under some jurisdictional RoLR schemes."[15]

5.3 Discussion in the First Interim Report

This option was not canvassed in the First Interim Report. The only specific discussion concerning large customers in the First Interim Report was related to ensuring they were fully informed about their right to 'opt out' of the RoLR arrangements and nominate their own back-up retailer in the event their current retailer failed.[16]

5.4 Analysis

The scope for large customers to be charged retail tariffs by their designated RoLR that reflect the passing-through of wholesale spot prices means that RoLRs need not face increased wholesale energy purchase cost risks in respect of these customers. However, spot price pass through would not, of itself, reduce the RoLR's increased credit support obligations to either AEMO or to DNSPs. Therefore, if large or very large customers could somehow be excluded from the RoLR arrangements, it is likely this would mitigate some of the increased financial obligations on RoLRs and reduce the risk of financial failure of a designated RoLR.

Notwithstanding these hypothetical benefits, it is not clear how a large customer could be entirely excluded from the RoLR regime without giving rise to the types of financial risks that the RoLR arrangements were designed to address – namely, the wholesale purchase cost exposure of either the failed retailer, AEMO or generators as a whole. Excluding a large customer from being transferred to a designated RoLR following the failure of its original retailer would mean that the customer would either be transferred to its nominated RoLR (see below), or continue to consume electricity until it was eventually disconnected. This consumption would increase the liabilities of the failed retailer and may never be paid for, resulting ultimately in the short-payment of generators. There are likely to be hundreds of thousands if not millions of 'large' customers in the NEM, and disconnecting such a large number of customers within a reasonable timeframe would not be feasible or efficient, given their likely high underlying willingness to

14 NERL, section 146.

15 First Interim Report, p.78.

16 First Interim Report, pp.77-78.

pay for electricity. Excluding very large customers could be more feasible due to their smaller number, but is still likely to be highly inefficient.

The NERL provides scope for large customers to nominate their own RoLR to help achieve greater certainty and more favourable terms in the event their retailer fails, so one option may be to oblige all large or very large customers to nominate their own RoLR and negotiate agreed terms of supply to apply in RoLR situations. However, it is not clear how this obligation could be enforced for all large customers, given the sheer number of them in the NEM and their typical status as non-participants. Potentially, each retailer could be obliged to ensure that all of its large customers had negotiated RoLR agreements in place, but that would likely to create a host of conflicts of interest and administrative and enforcement issues. It may be more feasible to oblige only very large customers to nominate their own RoLR or else face potential disconnection in the event of the failure of their original retailer. This is likely to be a more credible threat, and may well focus the attention of very large customers on the need to explicitly consider the implications of their current retailer failing. The question is whether very large customers, who already face the risk of being subject to spot price pass-through in the event of their retailer failing, would be incrementally more motivated to nominate their own RoLR if threatened with the risk of disconnection. Perhaps a less extreme option that may achieve a similar outcome is for retailers to be obliged to notify very large customers that if they do not nominate a RoLR, they will be exposed to the risk of spot price pass-through in the event of their retailer's failure. The nominated RoLR could then be obliged to notify AEMO of the customer's nomination, coupled with written evidence of the customer's nomination. This would help ensure that AEMO became aware of very large customers' RoLR nominations, given that AEMO presently has no operational interface with large customers.

However, even if such an obligation were introduced, it may not fundamentally change the overall financial risks facing the retailers remaining after a large retailer failure. This is because most very large customers who are served by a large retailer would likely nominate another large retailer to be their RoLR. This means that in the event of their large retailer failure, these very large customers would be transferred to one of the other two large retailers in the NEM. Accordingly, the outcome could be similar to what would happen if these very large customers were simply transferred – like smaller customers – to one or other of the remaining large retailers in the event their large retailer failed. The only advantage of providing a strong incentive for very large (or large) customers to nominate their own RoLR in advance is that it could provide some basis for those retailers to purchase some form of wholesale risk management insurance, such as swaptions (options over swap contracts) or captions (options over cap contracts) to hedge their potential wholesale exposures following the failure of another large retailer. However, to a large extent, large retailers already have these

incentives and our understanding is that they tend not to acquire these sorts of instruments in advance.

Finally, this option would not eliminate increased obligations in RoLR circumstances because given that all large retailers in the NEM have a great deal of small customers, the much more substantial obligations attached to these customers would not be affected.

5.5 Conclusion/recommendation

We suggest that excluding large or very large customers from the RoLR arrangements entirely should not be pursued, as it is likely to raise a number of monitoring and implementation difficulties without providing a demonstrable benefit that could not be achieved through other – or some combination of the other – less intrusive or extreme options. However, it may be worth obliging retailers to notify very large customers that if they do not nominate a RoLR, they will be exposed to the risk of spot price pass-through in the event of their retailer's failure. The nominated RoLR could then be obliged to notify AEMO of the customer's nomination.

6 Option 2: Temporarily waive DNSP credit support requirements

6.1 Outline

This option involves temporarily waiving (ie deferring) the requirements for the (new) RoLR to post credit support to DNSPs in respect of new customers attributable to the RoLR event for up to three months. This option was considered but rejected in the First Interim Report.[17] However, in light of the recommendation made in the First Interim Report to defer AEMO credit support obligations for up to five weeks in total, it is worth considering again whether a similar deferral should also apply to DNSP credit support obligations.

6.2 DNSP credit support requirements

The purpose of DNSP credit support arrangements is to manage the risk to electricity customers from retailer default leading to non-payment of network charges.[18] Customers are ultimately exposed to this risk because DNSPs can pass through unrecovered network charges to end-use customers. Chapter 6B of the NER set out the terms of the DNSP credit support that retailers are obliged to provide. These provisions supersede the previous jurisdiction-based schemes and reflect the outworkings of the National Energy Customer Framework (NECF) process.

Under Chapter 6B, the amount of credit support a retailer is required to provide a DNSP is determined by a formula. The formula begins with the specification of the **maximum unsecured credit allowance** for each DNSP. This is the amount of credit (in $ terms) that would be allowed to a retailer with a credit rating of A- or better before it must provide credit support. Presently, a DNSP's maximum unsecured credit allowance is set equal to 25% of its annual network charges billed to all retailers.

An **individual unsecured credit limit** is computed for each retailer for each DNSP as a function of the retailer's credit rating. Each retailer is assigned a **credit allowance percentage** that is multiplied by the maximum unsecured credit allowance.

17 First Interim Report, Table 4.1, p.29 and Appendix A, pp.97-98.

18 See Ministerial Council on Energy, Standing Committee of Officials Bulletin No. 192.

In general the credit allowance percentage for a retailer can be computed as:[19]

$$Credit\ Allowance\% = \frac{Probability\ of\ default\ (A-)}{Probability\ of\ default\ (Lower\ rating)}$$

Therefore, a retailer's individual unsecured credit limit bears no relationship to the size or market share of the retailer, in terms of the number or the size/consumption of its customers. A retailer with one thousand customers in a DNSP's area is entitled to the same individual unsecured credit support limit as a retailer of the same credit rating with one million customers in the DNSP's area.

Credit outstanding is defined in terms of the retailer's market share, total revenue for the relevant distributor and the number of days, on average, between the provision of the network service and payment by the retailer:

$$Credit\ outstanding = \frac{Days}{365} \times Market\ share \times Distributor\ annual\ revenue$$

If a retailer's credit outstanding exceeds its individual unsecured credit limit, the retailer would have to provide **credit support** for the difference:

$$Credit\ support = \max(Credit\ outstanding - Individual\ unsecured\ support\ limit, 0).$$

As a retailer's individual unsecured credit limit is fixed irrespective of the retailer's number of customers, the implication of this formula is that the quantum of a retailer's DNSP credit support obligation is disproportionately positively related to its market share. Accordingly, a sudden large increase in a RoLR's market share resulting from the failure of a large retailer will tend to disproportionately increase its DNSP credit support obligations. As noted in section 2.1, the requirement for RoLRs to post additional credit support to DNSPs must be met within 10 business days of the request. In most cases, this request is likely to be made shortly after a retailer is designated as a RoLR following the failure of another retailer.

6.3 Discussion in the First Interim Report

The option of temporarily waiving DNSP credit support requirements was considered but not recommended in the First Interim Report. The reason it was not recommended was that the AEMC considered that the increase in credit support required by DNSPs would not be as great as the increased credit support required by AEMO and the failure of a RoLR to provide DNSP credit support is not as immediate a cause of market suspension as failure to provide additional

[19] See letter from Jeff Balchin, PwC, to Chair, Energy Market Reform Working Group, dated 20 April 2012 (PwC report), p.3.

Option 2: Temporarily waive DNSP credit support requirements

credit support to AEMO.[20] The AEMC also noted the comments by AusGrid that this option would increase risks to DNSPs.

However, the First Interim Report did recommend delaying the AER's designation of RoLRs by approximately two and a half days.[21] As the obligation on retailers to provide credit support to DNSPs follows a DNSP request, this option would likely delay the need for a retailer to provide credit support to a DNSP by a similar time period, albeit without providing the retailer with additional warning of the need to provide the increased credit support.

More importantly, the First Interim Report recommended deferring the requirement on RoLRs to provide the full amount of AEMO credit support by up to four weeks after a one week 'period of grace'.[22] If this recommendation were implemented, the obligation on RoLRs to provide DNSP credit support could become a more immediate cause of financial stress on the RoLR than the (delayed) AEMO credit support requirements. Therefore, in light of the First Interim Report recommendations, it may be worthwhile to reconsider deferring DNSP credit support obligations.

6.4 Quantification of effect

This section considers the impact on a back-up RoLR's DNSP credit support obligations under the three scenarios outlined above.

In order to facilitate this analysis, it is necessary to take account of the annual revenues and relative sizes of DNSPs across the NEM.

Based on the AER's observation that DNSP network revenues for the current regulatory cycle (excluding Aurora and ActewAGL) are about $46.625 billion (in $2012),[23] annual DNSP network revenues are approximately $9.325 billion (see Table 2 below).

This Table also sets out the approximate credit support that would need to be provided by retailers with different market shares and with BBB- credit ratings from S&P to each DNSP, based on the formulae set out in chapter 6B of the NER. This shows that other things being equal, credit support requirements increase disproportionately for retailers with progressively larger market shares.

20 First Interim Report, Appendix A, pp.97-98.

21 First Interim Report, pp.62-69.

22 First Interim Report, pp.69-73.

23 AER *State of the Energy Market 2013*, p.63.

6.4.1 Scenario 1

Scenario 1 is the failure of a retailer with a market share (of consumption) across the NEM and in each region of 20% and the equal allocation of that retailer's customers to two other retailers also with market shares of 20% each.

Assuming that retailers pay bills on average about 3 months in arrears, the total credit outstanding for a retailer with a:

- 20% market share is approximately $466 million (being 0.2 x 0.25 x $9.325 billion)
- 30% market share is approximately $699 million (being 0.3 x 0.25 x $9.325 billion).

Therefore, the impact of Scenario 1 is to increase each RoLR's total credit outstanding by $233 million.

Table 2: DNSP credit support

Jurisdiction	DNSP	5-yr Revenue ($2012m)	Annual Revenue ($2012m)	Credit support ($2012m) required from a retailer with X% market share			
				15%	20%	30%	45%
Qld	Energex	7,065	1,413	0.0	0.0	28.3	81.2
	Ergon	6,590	1,318	0.0	0.0	26.4	75.8
NSW	AusGrid	9,590	1,918	0.0	0.0	38.4	110.3
	Endeavour	4,830	966	0.0	0.0	19.3	55.5
	Essential	6,110	1,222	0.0	0.0	24.4	70.3
Victoria	Powercor	2,500	500	0.0	0.0	10.0	28.8
	SP AusNet	2,405	481	0.0	0.0	9.6	27.7
	United Energy	1,640	328	0.0	0.0	6.6	18.9
	CitiPower	1,175	235	0.0	0.0	4.7	13.5
	Jemena	1,005	201	0.0	0.0	4.0	11.6
South Australia	SA Power Networks	3,715	743	0.0	0.0	14.9	42.7
Total		46,625	9,325	0.0	0.0	186.5	536.2

Source: AER State of the Energy Market 2013, NER chapter 6B and Frontier Economics.

Option 2: Temporarily waive DNSP credit support requirements

The maximum credit allowance for a BBB- retailer operating across the NEM (excluding Tasmania and the ACT) would be derived as follows:

- The maximum credit allowance is 25% of the $9.325 billion annual revenue, which is $2.33 billion
- A BBB- retailer receives 22% of the maximum credit allowance, which amounts to $513 million.

Prior to the failure of the retailer, none of the three 20% market share retailers would have needed to provide credit support to DNSPs. This is because each of their credit outstanding amounts was below their maximum credit allowances.

However, following the failure of one of the retailers, the two RoLRs' new credit outstanding exceeds their individual credit allowances by approximately $186 million. This means that each RoLR would need to provide that $186 million to DNSPs (collectively across the NEM) by way of credit support. DNSPs would be entitled to a total of $372 million of credit support, compared to nil prior to the large retailer failure. This is despite the fact that the only difference for DNSPs (collectively across the NEM) is that they have gone from being owed 60% of their revenues from three BBB- rated retailers to being owed 60% of their revenues from two BBB- rated retailers.

6.4.2 Scenario 2

Scenario 2 is the failure of a retailer with a market share (of consumption) across the NEM and in each region of 30% and the equal allocation of that retailer's customers to two other retailers each with market shares of 15% each.

The total credit outstanding for a retailer with a:

- 15% market share is nearly $350 million (being 0.15 x 0.25 x $9.325 billion)
- 30% market share is just over $699 million (being 0.3 x 0.25 x $9.325 billion).

Therefore, the impact of Scenario 2 is to increase each RoLR's total credit outstanding by approximately $349 million.

The maximum credit allowance for a BBB- retailer operating across the NEM (excluding Tasmania and the ACT) would be $513 million, as under Scenario 1.

Prior to the failure of the retailer, neither of the two smaller 15% market share retailers would have needed to provide credit support to DNSPs.

However, following the failure of the large 30% market share retailer, the two RoLRs' new credit outstanding amounts would exceed their individual credit allowance by approximately $186 million. This means that each RoLR would need to provide that $186 million to DNSPs (collectively across the NEM) by way of credit support. DNSPs would be entitled to a total of $372 million of credit support, double the amount they were entitled to prior to the large retailer failure.

6.4.3 Scenario 3

Scenario 3 is the failure of a retailer with a market share (of consumption) across the NEM and in each region of 30% and the entire allocation of that retailer's customers to one other retailer with a market share of 15%.

The total credit outstanding for a retailer with a:

- 15% market share is nearly $350 million (being 0.15 x 0.25 x $9.325 billion)
- 45% market share is $1.049 billion (being 0.45 x 0.25 x $9.325 billion).

Therefore, the impact of Scenario 3 is to increase the RoLR's total credit outstanding by $699 million.

The maximum credit allowance for a BBB- retailer operating across the NEM (excluding Tasmania and the ACT) would be $513 million, as under Scenario 1.

Prior to the failure of the retailer, the 15% market share retailer would not have needed to provide credit support to DNSPs.

However, following the failure of the large 30% market share retailer, the back-up RoLR's new credit outstanding amounts would exceed its individual credit allowance by approximately $536 million. This means that the back-up RoLR would need to provide that $536 million to DNSPs (collectively across the NEM) by way of credit support, nearly three times the amount ($186 million) they were entitled to prior to the large retailer failure.

6.5 Analysis

The principal advantage of any temporary waiving of DNSP credit support requirements is that it would directly defer some of the additional financial imposts on RoLRs. In the event of the failure of a large retailer, the required increase in a RoLR's DNSP credit support requirement could be substantial (see above). Deferring these obligations could provide the RoLR enough time to procure the required support and avoid failure and potentially a financial contagion.

The key drawback of deferring DNSP credit support obligations is that it would notionally increase the exposure of DNSPs (and ultimately, end-use customers) to the risk of financial failure of the designated RoLR(s) relative to the exposure they would face if the obligations were not deferred. However, the real question is whether the notional security provided by the current DNSP credit support obligations is real – if, in fact, the imposition of the current DNSP credit support obligations increases the likelihood of the RoLR failing and hence makes a financial contagion more likely to occur.

An important point to note is that if the designated RoLR cannot provide the required credit support within the required timeframe, it is even less likely that a

back-up RoLR would be able to satisfy this obligation. This suggests that some degree of deferral might be worthwhile.

In any case, *compared with the situation prior to the RoLR event*, DNSPs' exposures to retailer non-payment (across all retailers combined) may not rise greatly, if at all, especially in the short term. This is because the current DNSP credit support obligations under chapter 6B of the NER were deliberately designed to favour small retailers in order to diversify DNSPs' retailer exposures and to promote retail competition.[24]

Even where large retailers are currently providing DNSP credit support, the occurrence of a RoLR event would mean that DNSPs would have access to that support and hence their actual exposures to the new RoLR would only increase gradually over time as the consumption of the transferred customers accumulated following the transfer.

The aggregate retailer credit support provided to DNSPs under each Scenario prior to the RoLR event would be as follows:

- Scenario 1: No retailer would be providing credit support to DNSPs because their credit outstanding of all three retailers would be less than their individual credit allowances. Therefore, any deferral of DNSP credit support obligations would not diminish the aggregate quantum of credit support provided by all retailers collectively to DNSPs.
- Scenario 2: Only the 30% market share retailer would be providing credit support (of $186 million) to DNSPs prior to its failure. This support would be made available to DNSPs following the failure of the large retailer. Thereafter, DNSPs' exposures would start to increase as the transferred customers consumed electricity supplied by either of the two RoLRs. Note that:
  - If the credit support obligations were not deferred, each of the two RoLRs would be required to post $186 million in credit support, doubling the aggregate amount of support provided to DNSPs compared with the situation prior to the RoLR event.
  - It would take several weeks after transfer to the RoLRs for the actual credit outstanding of the two RoLRs (being initially $350 million) to exceed their individual credit allowances of $513 million. Therefore, if chapter 6B of the NER imposed DNSP credit support obligations based on retailers' *actual* credit outstanding rather than *notional* credit outstanding, it would not oblige the two RoLRs to provide any credit support whatsoever for some time after the transfer due to the RoLR event.

24 MCE Bulletin 192.

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- Scenario 3: Again, only the 30% market share retailer would be providing credit support (of $186 million) to DNSPs prior to its failure. This support would be made available to DNSPs following the failure of the large retailer. Thereafter, DNSPs' exposures would start to increase as the transferred customers consumed electricity supplied by the (single) RoLR. Note that:
  - If the credit support obligations were not deferred, the RoLR would be required to post $536 million in credit support, nearly triple the amount of support provided to DNSPs compared with the situation prior to the RoLR event.
  - It would take a number of days or weeks after transfer for the actual credit outstanding of the RoLR (initially $350 million) to exceed its individual credit allowances of $513 million. Therefore, if chapter 6B of the NER imposed DNSP credit support obligations based on retailers' *actual* credit outstanding rather than *notional* credit outstanding, it would not oblige the RoLR to provide any credit support whatsoever for some time after the transfer due to the RoLR event.

Therefore, maintaining the existing DNSP credit support provisions would lead to either no change or an increase in the aggregate amount of credit support provided by retailers to DNSPs across the NEM. This means that the credit support obligations applicable after the failure of a large retailer could be deferred or lessened to some extent without increasing the aggregate exposure of DNSPs to retailers relative to before the RoLR event.

Another reason for relaxing DNSP credit support obligations is that if increased DNSP credit support obligations contributed to a financial contagion in the NEM, DNSPs and end-use customers would be heavily exposed in any event.

The AEMC's First Interim Report commented that increased DNSP credit support requirements are *not as immediate* a potential cause of the market suspension of a RoLR as AEMO credit support requirements. While this may be the case under the existing arrangements in the NERL and NER, it may not be the case in future in light of the First Interim Report's recommendations to:

- Delay designation of the RoLR by two and a half days to allow the AER more time to assess and potentially select an additional RoLR to be the designated RoLR; and
- Deferring the requirement on RoLRs to provide the full amount of AEMO credit support by up to four weeks after a one week of grace.

6.6 Conclusion/recommendation

Given the high exposure that DNSPs and end-use customers would face in the event of a retail financial contagion, we think that the time a RoLR has to respond to a DNSP's request for increased credit support should be the same as

Option 2: Temporarily waive DNSP credit support requirements

the time it has to provide increased credit support to AEMO in response to a change in the RoLR's prudential settings. Both obligations should fall due at a time that allows the RoLR to be able to arrange the required financial accommodation.

This means that if the time available to a RoLR to fully meet an increase in its credit support obligations to AEMO is extended to five weeks after the designation of the RoLR and the change in the RoLR's prudential settings, then the date by which a RoLR needs to respond to a DNSP request for increased credit support should also be increased to five weeks.

We recognise that, by itself, this option does not tackle increased wholesale purchase cost exposures attributable to the transferred customers. This would need to be addressed through another option.

Option 2: Temporarily waive DNSP credit support requirements

7 Option 3: Temporarily waive AEMO credit support requirements

7.1 Outline

This option involves further postponing the requirements for the (new) RoLR to provide credit support to AEMO in respect of new customers attributable to the RoLR event, beyond the deferrals recommended in the First Interim Report. This option would only apply in case of the failure of a 'systemically important market participant'.

7.2 AEMO credit support requirements

The purpose of AEMO credit support arrangements is to manage the risk to AEMO of retailer default leading to non-payment of spot electricity purchases. The lag between electricity consumption and settlement under the Rules is a rolling 5 weeks, which gives rise to the risk that electricity consumed by a retailer's customers may not be paid for if the retailer is suspended.

Chapter 3.3 of the NER set out the nature of market participants' credit support obligations to AEMO. Credit support is required from all market participants who do not meet the **acceptable credit criteria**. Acceptable credit criteria are currently defined as having a rating of A-1 or higher from Standard & Poor's or P-1 from Moody's and being under the prudential supervision of APRA.[25] The required credit support must be provided by an approved financial institution acceptable credit support provider that meets the acceptable credit criteria, typically a bank.[26]

Participants must provide AEMO with credit support of *at least* the participant's current **Maximum Credit Limit** (MCL).[27] The MCL for each participant must be such that the probability of the participant's outstandings to AEMO exceeding the MCL by the time the participant is suspended from the market for non-payment does not exceed the **prudential standard** of 2%.[28]

The MCL is set equal to the sum of the:

- **Outstandings limit** (OSL) – is AEMO's estimate of the maximum value that a participant's outstandings can reach over the payment period.

25 NER clause 3.3.4.

26 NER clause 3.3.2.

27 NER clause 3.3.5.

28 NER clause 3.3.4A.

- **Prudential margin** (PM) – an amount designed to cover the value of spot purchases accruing between when a retailer fails to pay an invoice and the date the AEMO suspends the retailer. For the purposes of calculating the PM, the time between the day that a participant's outstandings exceed its trading limit to when the participant is suspended from the market (known as the **reaction period**) is seven days.

(together with prudential standard, the '**prudential settings**')

AEMO is responsible for determining each participant's prudential settings, in accordance with published procedures. The Rules require that the methodology to be used by AEMO to determine prudential settings must take account of a variety of factors including:

- The relevant regional reference price and its volatility and
- The level, pattern and volatility of the participant's load.[29]

The Rules permit AEMO to change a participant's prudential settings at any time with one business day's notice. Any changes that result in an increased MCL require the participant to increase its level of credit support immediately,[30] by no later than 11am on the effective date of the MCL. If the retailer fails to provide this increased support by the relevant time, this constitutes a **default event**. AEMO may then issue a **default notice** on the participant. If the default is not rectified by 1pm on the following day, then AEMO may issue a **suspension notice**, suspending the retailer.

The financial failure of a large retailer and the transfer of its customers to a designated RoLR is likely to lead to a large increase in the RoLR's MCL and hence, its obligations to provide credit support to AEMO.

In addition, the Rules oblige market participants to remain within their permitted **trading limits**. A participant's trading limit is the difference between the amount of credit support it has provided to AEMO and its prudential margin. If a participant's outstandings exceed its trading limit, AEMO may issue a call notice, which would require the participant to provide additional credit support or some alternative.[31]

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29 NER clause 3.3.8(d).

30 NER clause 3.3.5.

31 NER clause 3.3.10-3.3.13.

Option 3: Temporarily waive AEMO credit support requirements

7.3 Discussion in the First Interim Report

The option of temporarily waiving AEMO credit support requirements was considered and recommended in the First Interim Report.[32]

The AEMC noted that if a large retailer with a 20% market share failed and all of its customers were transferred to a RoLR following a time of high spot prices, the RoLR's MCL could be expected to increase by $250 million to $1 billion depending on the level of prices assumed in the MCL calculation. If the failed retailer's customers were transferred to two RoLRs, the increase for each RoLR would be halved.[33]

The AEMC also noted that a RoLR must also post cash or credit support to meet its Trading Limit. If a RoLR acquires a 20% market share of customers during an 'extreme' price period (of spot prices averaging $1,000/MWh), the increase could be worth $100 million per day (half that if the load is spread across two RoLRs).[34] If the Cumulative Price Threshold (CPT) is reached and the Administered Price Cap (APC) of $300/MWh is applied, the required increase in credit support would be approximately $30 million per day (again half if the failed retailer's load is split between two RoLRs).[35]

Accordingly, the AEMC proposed that following any RoLR event:[36]

- There would be a one week 'period of grace' during which:
  - The designated RoLR would not need to provide additional credit support to meet the revised MCL; and
  - The breach of the revised trading limit due to an increase in customers from the RoLR event would not trigger a call notice.
- Following that, the RoLR's MCL would be raised in increments over a four week period. This would more closely reflect the increase in outstandings over this time as energy is consumed and the RoLR's obligations to pay AEMO increase.

The rationale for recommending the option was that the AEMO credit support obligations on a designated RoLR could rise so rapidly following the failure of a large retailer that 'an otherwise solvent' RoLR could fail to meet them simply because the time available to do so is so short, potentially triggering a cascading

32 First Interim Report, pp.69-73.

33 First Interim Report, pp.71-72.

34 First Interim Report, p.72.

35 First Interim Report, p.72.

36 First Interim Report, p.71.

retailer failure. This would serve no purpose because in the event of cascading failure, generators would be likely to be short-paid in any case.[37]

7.4 Quantification of effect

We sought quantitative information from AEMO regarding the potential effect of a large retailer financial failure on other large retailers' credit support obligations to AEMO. We requested this information under the three scenarios outlined in section 3.

7.4.1 Assumptions

AEMO provided its analysis based on the following assumptions.

Market parameters

The market parameters used by AEMO are as follows:

- Calculations assume retail load only – excluding any offset from vertically-integrated generation or reallocations.
- 'Normal' parameters are based on Winter 2014 spot prices, excluding $20/MWh to reflect the removal of the carbon price: $35/MWh average weekly price, Outstandings Limit (OSL) volatility factor of 1.3 and Prudential Margin (PM) volatility factor of 1.5.
- 'High' parameters are based on the period around June 2007 conditions: $60/MWh average weekly price, OSL volatility factor of 2.5 and PM volatility factor of 3.5.

See Table 3 below.

Table 3: Assumed market parameters

Parameter	Normal (Current)	High (June 2007)
Total Daily Energy (MWh)	500,000	500,000
Average price (weekly)	$35/MWh	$60/MWh
OSL volatility factor	1.3	2.5
PM volatility factor	1.5	3.5

Source: AEMO.

37 First Interim Report, pp.72-73.

MCL requirements

- MCL is calculated using the new prudential standard, based on low and high parameters
- MCL must be met by credit support
- Post-failure MCL rises immediately; but this would ramp up over 4 weeks under the AEMC's proposal (see below).

7.4.2 Scenario 1

Scenario 1 is the failure of a retailer (Retailer A) with a market share (of consumption) across the NEM and in each region of 20% and the equal allocation of that retailer's customers to two other retailers (Retailers B and C) also with market shares of 20% each.

Table 4: Scenario 1 – Minimum collateral requirements (MCL)

Retailer	Pre-failure		Post failure	
	Normal (Current)	High (June 2007)	Normal (Current)	High (June 2007)
Retailer A Pre-failure: 20% market share Post failure: 0% market share	$196m	$672m	$0	$0
Retailer B Pre-failure: 20% market share Post failure: 30% market share	$196m	$672m	$294m	$1,008m
Retailer C Pre-failure: 20% market share Post failure: 30% market share	$196m	$672m	$294m	$1,008m

Source: AEMO.

Under this scenario, MCL requirements for the surviving retailers increase by between $98 million (under normal conditions) and $336 million (under June 2007 conditions).

7.4.3 Scenario 2

Scenario 2 is the failure of a retailer with a market share (of consumption) across the NEM and in each region of 30% and the equal allocation of that retailer's customers to two other retailers each with market shares of 15% each.

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Table 5: Scenario 2 – Minimum collateral requirements (MCL)

Retailer	Pre-failure		Post failure	
	Normal (Current)	High (June 2007)	Normal (Current)	High (June 2007)
Retailer A Pre-failure: 30% market share Post failure: 0% market share	$294m	$1,008m	$0	$0
Retailer B Pre-failure: 15% market share Post failure: 30% market share	$147m	$504m	$294m	$1,008m
Retailer C Pre-failure: 15% market share Post failure: 30% market share	$147m	$504m	$294m	$1,008m

Source: AEMO.

Under this scenario, MCL requirements for the surviving retailers increase by between $147 million (under normal conditions) and $504 million (under June 2007 conditions).

7.4.4 Scenario 3

Scenario 3 is the failure of a retailer with a market share (of consumption) across the NEM and in each region of 30% and the entire allocation of that retailer's customers to one other retailer with a market share of 15%.

Table 6: Scenario 3 – Minimum collateral requirements (MCL)

Retailer	Pre-failure		Post failure	
	Normal (Current)	High (June 2007)	Normal (Current)	High (June 2007)
Retailer A Pre-failure: 30% market share Post failure: 0% market share	$294m	$1,008m	$0	$0
Retailer B Pre-failure: 15% market share Post failure: 45% market share	$147m	$504m	$441m	$1,512m

Source: AEMO.

Under this scenario, MCL requirements for the surviving retailer increases by between $294 million (under normal conditions) and $1,008 million (under June 2007 conditions).

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7.5 Analysis

The principal advantage of any temporary waiving of AEMO credit support requirements is that it would directly defer some of the additional financial imposts on RoLRs. In the event of the failure of a large retailer, the required increase in a RoLR's AEMO credit support requirement could be substantial (see above). Deferring these obligations further (beyond the recommendations in the First Interim Report) could provide the RoLR with enough time to procure the required support and avoid failure and potentially a financial contagion.

The key drawback of further deferring AEMO credit support obligations is that it would notionally increase the exposure of AEMO – and ultimately, generators – to the risk of financial failure of the designated RoLR(s) relative to the exposure they would face if the obligations were not further deferred.

However, as with deferring DNSP credit support obligations, the real question is whether the notional security provided by the post-First Interim Report AEMO credit support obligations is real – if, in fact, the imposition of the post-First Interim Report AEMO credit support obligations increases the likelihood of the RoLR failing and hence makes a financial contagion more likely to occur.

Furthermore, as with DNSP credit support, if the designated RoLR cannot provide the required AEMO credit support within the required timeframe, it is even less likely that a back-up RoLR would be able to satisfy this obligation. This suggests that a further deferral might be worthwhile.

We consider that the duration of the deferral of AEMO credit support obligations should ideally be sufficient to enable retailers to seek the increased level of credit support from providers other than their existing provider. If the deferral was only long enough for retailers to seek more credit support from their existing provider, this would place their existing provider in a strong bargaining position in negotiating the terms of the additional support. Given that a RoLR's reasonable costs of procuring (increased) credit support are recoverable from end-use customers, consumers would ultimately bear the cost of existing providers' bargaining power. This would reduce overall welfare in the market.

The ability and willingness of banks (as the principal suppliers of credit support) to provide credit support or extend additional support to electricity retailers will depend on a range of factors, including:

- The perceived riskiness of the retailer, as indicated by variables such as its credit rating and prevailing wholesale market conditions;
- The existing exposure of the bank to the retailer; and
- The bank's own prudential obligations, such as to the Australian Prudential Regulation Authority (APRA).

Based on informal enquiries with a single major credit support provider, it appears that:

- Most if not all of Australia's major four banks already provide some degree of financial accommodation to all the three large NEM gentailers. Typically, retailers have a primary bank they deal with who arranges credit support, but that primary institution then shares its exposure to the retailer with several other banks. The primary bank earns a fee for this service and all banks that ultimately provide the credit support to the retailer impose a charge for this accommodation. This means that the big four banks generally have a reasonable familiarity with the financial positions of the three large gentailers; but it also means that the big four already have fairly large exposures to the large gentailers.
- For these reasons, obtaining a substantial increase in credit support to underwrite an increase of even a large (up to 200% - Scenario 3) increase of retailers' MCLs from a credit support provider should be possible under most financial market conditions, at least for the short term. Arranging the support may take additional time where the retailer seeking the increased support is already highly indebted to Australian lenders. In this case, the retailer's credit support provider would likely need to negotiate sharing arrangements for the increased support with other financial institutions in Australia or overseas.
- Given the big four banks' existing exposures to the gentailers and the banks' prudential requirements, it may be difficult for the banks to sustain substantially higher levels of credit support for terms of beyond 12 months during prolonged periods of financial stress. Generally, large retailers who receive a large tranche of new customers due to another large retailer's failure will need to negotiate fresh credit support arrangements over time, seek new sources of equity or debt or dispose of customers in some manner.

If these assumptions hold, there would be little incremental benefit in further extending the duration of deferral of AEMO credit support obligations beyond the deferral recommended in the First Interim Report.

7.6 Conclusion/recommendation

We recommend that RoLRs' obligations to provide increased credit support to AEMO should not be further extended beyond the recommended extensions in the First Interim Report.

8 Option 4: Temporarily reduce MPC and/or the CPT

8.1 Outline

This option involves temporarily reducing the Market Price Cap (MPC) and/or the Cumulative Pricing Threshold (CPT) that apply in the NEM wholesale spot market. The option of reducing the MPC to $300/MWh for a specified period of time after a RoLR event was considered but rejected in the First Interim Report.[38] As considered in this report, this option would only apply in case of the failure of a 'systemically important market participant'.

8.2 Reliability settings

The MPC and CPT are two of the three components of the NEM reliability settings (the third being the market floor price of -$1,000/MWh). The reliability settings are intended to deliver the NEM reliability standard, which is that expected electricity consumption demand left unserved in any NEM region in any year does not exceed 0.002%.[39]

- The MPC for 2013/14 is $13,100/MWh rises each financial year in line with the Australian Bureau of Statistics' consumer price index (CPI).
- The CPT for 2013/14 is $197,100 and it is also meant to rise each financial year in line with the CPI. The CPT has historically been – and remains – set at 15 times the MPC.

If the sum of the spot prices in a region over 336 consecutive half-hourly trading intervals exceeds the CPT, the Administered Price Cap (APC) of $300/MWh will be applied in that region for so long as the CPT is exceeded. Therefore, if the spot price in a region exceeds an average of $586.60/MWh over a week, the APC will apply. This means that over any given rolling seven-day period, there is presently a *de facto* average wholesale price cap in the NEM of $871/MWh.[40]

38 First Interim Report, Appendix A, pp.98-99.

39 See AEMC Reliability Panel, *Fact Sheet: The Reliability Settings*, 9 May 2013.

40 Being the weighted-average of 15 trading intervals of MPC prices and the remaining 321 trading intervals at $300/MWh.

8.3 Discussion in the First Interim Report

The option of temporarily reducing the MPC and/or the CPT was considered but rejected in the First Interim Report. The reason was that:[41]

> While a spot market cap would have the benefit of capping financial obligations, it represents a major change to market design, and would have a wide-reaching impact on businesses not immediately affected by the RoLR event.

The AER supported closer consideration of this option, suggesting (as summarised in the First Interim Report) that:

- If properly formulated, it would have negligible distortionary impacts and would not affect incentives to invest, as it would only be triggered in extreme events.
- It would assist in ensuring that the scale of the problem does not escalate rapidly.
- It places a limit on the rapid escalation of financial obligations, and makes a trade sale more feasible with limited government cost.

Other submitters – mainly generators and gentailers, but also the Victorian Department of Primary Industries – generally opposed the proposal on the basis that it would harm generators and distort the operation of the energy-only market.

8.4 Quantification of effect

A reduction in the MPC and/or the CPT (leading to sooner implementation of the APC) would directly reduce both:

- RoLRs' AEMO credit support obligations – for example, as noted in the previous section, the implementation of the $300/MWh APC in place of a spot price of $1,000/MWh would reduce the need for a RoLR receiving customers from a failed retailer with a 20% market share to provide increased cash or credit support to meet its Trading Limit from $100 million per day to approximately $30 million (half that if spread across two RoLRs).
- Wholesale energy purchase cost exposures – likewise, energy purchase cost risks would be reduced to the extent a lower MPC or CPT led to a lower prevailing or expected wholesale spot price. This should flow through to lower swap contract strike prices and cap and option contract premia.

41 First Interim Report, Appendix A, pp.98-99.

8.5 Analysis

The key benefits of reducing the MPC and/or the CPT in the event of the failure of a large retailer are that it would:

- Directly reduce a RoLR's exposure to high wholesale electricity purchase costs by preventing spot prices from:
  - rising beyond the level of the (reduced) MPC; or
  - remaining high for prolonged periods; and
- Indirectly reduce a RoLR's exposure to high wholesale electricity purchase costs by reducing the incentives for generators to exercise transient pricing power under the tight market conditions likely to accompany a large retailer failure.
- Indirectly reduce a RoLR's need to provide AEMO with credit support, by influencing the prudential settings that apply to market participants.[42]

This is the only option that would directly tackle both of these pressures on RoLRs following the failure of a large retailer. Given that a large retailer is most likely to fail following a period of high spot prices, lowering the MPC to, say, $300/MWh, or imposing the APC sooner by reducing the CPT should reduce the wholesale purchase cost risks and AEMO credit support burden faced by the RoLR(s). We note that a CPT of $100,800 would be consistent with a weekly average trading interval price of $300/MWh.

Further, if reducing the MPC could prevent a financial contagion, then any loss in revenue experienced by generators due to the lower MPC would have to be compared against the risks of short-payment in contagion circumstances. In other words, the incremental cost of a lower MPC to generators against the base case state of the world (in which this option was not implemented) could be minimal or even negative (ie generators would be better off due to the avoidance of a financial contagion).

Finally, this option would minimise price shocks to end-use customers from events that led to a large retailer failure. To the extent that a large retailer failure was caused by plant or network outages, perhaps combined with extreme demand conditions, customers would not be exposed to as high pass-through costs from retailers or DNSP charges.

However, reducing the MPC is likely to have a number of drawbacks.

First, even if it is only applied where a named 'SIMP' (eg AGL, Origin and EnergyAustralia) failed, it could reduce incentives on the margin for retailers to

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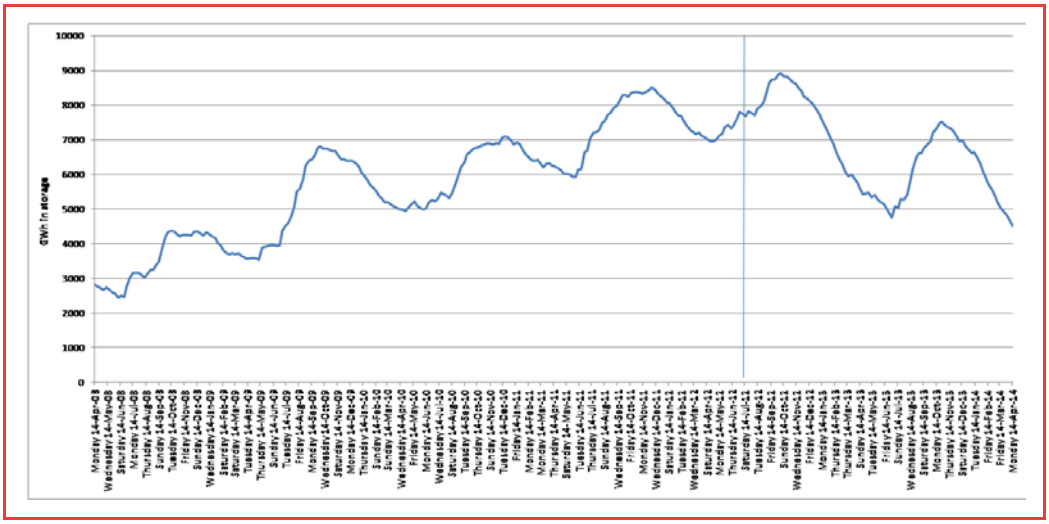
42 As noted above, prudential settings must take account of factors including the relevant regional reference price and its volatility – see NER clause 3.3.8(d).

enter derivative contracts, particularly caps, which often have strike prices at $300/MWh. This 'moral hazard' could perversely increase the risks of a large retailer failure. This option could also give rise to another form of moral failure, in that participants might face reduced incentives to properly assess OTC counterparty risks.

Second, there is a risk that a temporarily lower MPC could discourage some peaking generators from offering all of their potential power output to the wholesale market. Some thermal peaking generators could have short-run marginal costs higher than $300/MWh. For example, the SRMC of the Mackay gas turbine in Queensland is over $450/MWh. While this could be overcome by lowering the MPC to a higher value – say, $500/MWh – this would not address the incentives that storage hydro plant (such as those owned by Snowy Hydro and Hydro Tasmania) could have to avoid generating as much as they could for the duration of the lower MPC. The incentive on storage hydro plant to conserve water was observed in the lead up to the introduction of the carbon price in mid-2012.

Figure 1: NEM hydro storages pre- and post- carbon pricing



Source: Frontier Economics

These incentives could exacerbate any physical shortfalls of power in the market as well as the accompanying financial stress.

Third, reducing the MPC or the CPT would harm incentives to invest in new generation or to maintain their existing plant and may ultimately jeopardise the satisfaction of the NEM reliability standard. We do not agree with the AER's view that a lower MPC could have negligible distortionary impacts on incentives to invest because it would only be triggered in extreme events. After all, the current MPC is only designed and expected to be reached for rare and short periods of time.

Without undertaking market modelling, it is difficult to be confident that the current MPC and CPT could be maintained, let alone significantly reduced – even temporarily – without jeopardising the NEM reliability standard, *in the long run*.

Nevertheless, over the next few years, the level of excess reserve generation capacity in the NEM means that a somewhat lower MPC imposed on a rare occasion for a limited period of time would be unlikely to lead to a rapid enough mothballing or retirement of existing generators such that the reliability standard would be breached. The question is thus whether it would be desirable to reduce the MPC and/or the CPT in the medium term to achieve a financial resilience objective given the signal this would send to future investors contemplating generation investment in the NEM.

One reason for thinking that signals to future investors may not be too badly damaged by temporarily reducing the MPC is that the large failed retailer may have failed precisely because an OTC generator counterparty has repudiated its contracts and left the large retailer exposed to high spot prices.

Under these circumstances, lowering the MPC could in a sense act as a partial and highly imperfect substitute for a failed generator honouring its contracts. This is because the effective (post hedge settlement) average price paid by (all) retailers with a reduced MPC could be:

- **closer to** the effective price that would have been paid if the failed generator had honoured its contracts
- **than** the effective price that would be paid with an unchanged MPC.

Consider the following example:

- Retailer A has 100 customers with a load of 100 MW in total
- Retailer B has 200 customers with a load of 200 MW in total
- Generator 1 has a 100 MW swap with Retailer A with a strike price of $100/MWh
- Generator 2 has a 200 MW swap with Retailer B with a strike price of $100/MWh
- Generator 1 experiences an outage, causing the spot price to reach $10,100/MWh
- Generator 1 quickly becomes insolvent and defaults on its contract obligations.
- At this point:
  - Retailer B's wholesale energy purchase costs remain unchanged at $100/MWh, as it is fully hedged with contracts entered into with Generator 2.

Option 4: Temporarily reduce MPC and/or the CPT

- If Generator 1 had not repudiated its contracts, Retailer A's wholesale costs would also have remained unchanged at $100/MWh.
- The weighted-average effective wholesale energy cost across the market would have been $100/MWh.

- However, given Generator 1's repudiation:
  - Assuming no change to the MPC, Retailer A would be exposed to an increase in its energy purchase costs of 100 MW x $10,000/MWh = $1,000,000/hour. This would yield a weighted-average energy purchase cost across the market of (200 MW x $100/MWh + 100 MW x $10,100/MWh)/300 = $3,433.33/MWh
  - If the MPC were reduced to, say, $500/MWh, Retailer A's wholesale costs would only rise by 100 MW x $400/MWh = $40,000/hour. This would yield a weighted-average energy purchase cost across the market of (200 MW x $100/MWh + 100 MW x $500/MWh)/300 = $233.33/MWh.

Clearly, Retailer A's (and the market's overall) wholesale purchase costs under a reduced MPC more closely resemble what its (and the market's) purchase costs would be if Generator 1 did not repudiate its contracts than the retailer (and the market's) actual purchase costs with an unchanged MPC. This suggests that the economic incentives and distributional effects of lowering the MPC may not be unreasonable in such cases.

Of course, if a large retailer fails for other reasons – such as a deliberate lack of adequate hedging or the failure of a gentailer's generator – then the financial impacts of reducing the MPC may be less justifiable. For example, generators as a whole should not have their revenues reduced due to a lower MPC if the failed retailer made a calculated decision to underhedge its retail load. Under these circumstances, it would be quite appropriate for generators to enjoy high spot prices to the extent they are not hedged.

8.6 Conclusion/recommendation

In theory, it may be possible to reduce the MPC and/or the CPT to help prevent financial contagion in the NEM in the event of a large retailer failure without jeopardising the satisfaction of the NEM reliability standard, at least for as long as high levels of excess reserve continue to prevail. In some cases, the financial implications of this option may not be too different to what would have happened if the failed generator that gave rise to the large retailer failure had continued to honour its wholesale hedge contracts. But this will not always be the case.

However, we do not recommend this option because it would risk undermining the integrity of the signals provided by the NEM reliability settings. It could

encourage investors to not respond to high expected wholesale prices even after the MPC was returned to the level appropriate for a market experiencing conditions closer to a demand-supply equilibrium. As discussed above, it could also give rise to several forms of inefficient behaviour due to moral hazard.

We also do not consider that the option of applying a lower MPC to one or a group of participants or in a single NEM region is feasible. For example, if the RoLR(s) taking on the customers of a failed large retailer were entitled to benefit from a lower MPC than other participants, it would lead to a shortfall in settlements that would need to be funded either by other retailers or by generators being short-paid. Differing MPCs in different regions could distort dispatch and power flows.

Deferred settlement

Description of option and benefits

In our view, a better option than lowering the MPC would be a form of partial deferred settlement of the NEM. This option would seek to achieve the financial stability advantages of lowering the MPC but without harming the investment incentives provided by allowing the spot price to reach the current MPC. This could be achieved if a large retailer failure triggered changes to NEM settlements such that:

- Settlement occurred normally (ie within the normal timeframe) *except* in respect of electricity purchases made by a RoLR within a defined time period after the RoLR event (say, 3 months). For purchases made by a RoLR, settlement would occur on the basis that the RoLR's wholesale purchases made at times when the relevant wholesale spot price was in excess of, say, a two times multiple of the APC (ie presently, $600/MWh) occurred at that price ($600/MWh). All generators in the relevant NEM region(s) that were dispatched during these periods would receive less, on a *pro rata* dispatched basis, during this initial settlement than they ordinarily would receive. IRSR unit holders would also receive less during this initial period; and
- Settlements attributable to RoLR electricity purchases occurring at prices in excess of the relevant APC multiple ($600/MWh) would be settled at a later time. This delay should be such that RoLRs would be able to recover their increased energy purchase costs, either directly from the customers of the failed retailer or through a charge levied on DNSPs (and ultimately recovered from all customers). This would avoid undermining generator operating and investment signals and would ensure customers faced the cost consequences of real-time scarce supply conditions.

Potential drawbacks

One of the key drawbacks of a partial deferred settlement option is that it would shift the cashflow problem from RoLRs to generators obliged to make difference

Option 4: Temporarily reduce MPC and/or the CPT

payments to counterparties under financial hedge contracts, both OTC and ASX-traded. Under certain assumptions or scenarios, this could leave generators with difficulties in making their difference payments.

For example, assume that a retailer with a 30% market share in each NEM region failed and its customers were transferred to one or more RoLRs. This would mean that approximately 30% of retail load in the market would be subject to deferred settlement if spot prices exceeded $600/MWh. At worst, if spot prices reached the MPC of $13,100/MWh, generators across the market would be temporarily short-paid approximately 28.6% of their spot revenues (being $12,500/MWh * 0.3 / $13,100/MWh) in respect of each MWh of their output. That 28.6% would be recovered after the agreed deferment period; say, 3 months. A generator that had contracted via swaps at a strike price of $50/MWh would be faced with the need to make difference payments of approximately $13,050/MWh for each megawatt it had contracted. If the generator had 70% of its available capacity of 100 MW, the generator would:

- Need to pay difference payments of approximately $913,500 per hour
- Receive spot payment from AEMO of approximately $935,000 per hour
- Leaving it with a 'coverage ratio' of 1.02353 – ie the generator's receipts would be in excess of difference payments

More detailed modelling of this option is discussed below.

Of course, the generator's spot receipts would also need to fund its fuel and other variable operating and maintenance costs.

Further, to the extent the failed retailer had a larger market share or the generator was contracted to a higher proportion of its dispatched output, the generator would experience a lower coverage ratio and may be out-of-pocket.

On the other hand, we understand that the counterparties to a failed retailer's hedges may have the option of terminating their hedge contracts with the failed retailer. This would reduce at least some generators' obligations to make difference payments on contracts.

Another key drawback of the option would be the practical difficulties for AEMO in implementing partial deferred settlement. AEMO has indicated that its settlement systems would need to differentiate between how a customer transferred to a RoLR – either naturally or through a RoLR transfer – in order to work out the correct immediate settlement outcome. At present, the settlement process is simply an aggregation of energy by retailer at a point in time, without regard to how the customer transferred. We understand that the issues AEMO would need to address in implementing this option would be considerable.

Financial modelling

Our financial modelling of the deferred settlement option was in two parts.

The first part was determining the percentage of time when the half-hourly spot price exceeded the deferred settlement threshold (in this case, two times the APC, being $600/MWh). We determined this percentage for each region of the NEM (excluding the former Snowy region) and across the NEM as a whole on a load-weighted basis. The results of this analysis are presented in Table 7 and Figure 1 below.

Table 7: NEM historical spot prices - % of trading interval prices > $600/MWh

FinYear	NSW	QLD	SA	TAS	VIC	NEM
2000	0.09%	0.52%	0.46%	-	0.04%	0.27%
2001	0.22%	0.29%	0.83%	-	0.46%	0.37%
2002	0.25%	0.30%	0.21%	-	0.18%	0.25%
2003	0.24%	0.54%	0.13%	-	0.14%	0.38%
2004	0.30%	0.19%	0.23%	-	0.11%	0.23%
2005	0.33%	0.19%	0.15%	-	0.07%	0.28%
2006	0.27%	0.15%	0.33%	0.26%	0.26%	0.33%
2007	0.32%	0.32%	0.19%	0.11%	0.31%	0.38%
2008	0.03%	0.38%	0.36%	0.04%	0.11%	0.54%
2009	0.16%	0.15%	0.27%	0.43%	0.16%	0.34%
2010	0.48%	0.25%	0.43%	0.10%	0.22%	0.74%
2011	0.18%	0.15%	0.09%	0.06%	0.05%	0.26%
2012	0.01%	0.03%	0.07%	0.02%	0.00%	0.01%
2013	0.00%	0.43%	0.42%	0.08%	0.12%	0.21%
2014	0.02%	0.25%	0.21%	0.08%	0.10%	0.27%

Source: Frontier analysis of AEMO 30-minute price and demand data

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The second part of our modelling involved estimating the financial implications of the deferred settlement option under some of the most extreme conditions in the NEM's history for both:

- The hypothetical RoLRs in our three scenarios; and
- A hypothetical generator with 100 MW capacity (assuming the generator was always fully available and dispatched).

Impact on the RoLR

For the hypothetical RoLRs in our three scenarios, we examined the implications of the option for the week commencing 30th January 2011 – the week with the all-time highest NEM-wide average price[43] ($359.43/MWh). In that week, if spot prices across all regions had been capped at $600/MWh, the equivalent NEM-wide average spot price would have been $133.44/MWh.

We estimated the implications of the option for the RoLRs on the basis that the settlement deferral would only apply to their RoLR-related new load. For example, in Scenario 1, this would mean that the deferral would only apply in respect of one-third of retailer B and C's post-failure loads (being the 10% market share they gained on top of their 20% pre-existing shares).

We calculated the weekly settlement amounts for all the RoLRs in our three scenarios, as showed in Table 8.

Table 8: Impact of deferred settlement on RoLRs

Scenario	Retailer	Pre-failure market share	Post-failure market share	Weekly settlement amount (no deferral)	Weekly settlement amount (deferral)
1	B, C	20%	30%	$377,399,527	$298,305,183
2	B, C	15%	30%	$377,399,527	$258,758,012
3	B	15%	45%	$566,099,291	$328,816,260

Source: Frontier analysis of AEMO 30-minute price and demand data

This analysis shows that deferring settlement in respect of spot price outcomes in excess of two times the APC could have significant cash-flow benefits for

[43] This was derived by: (i) calculating the NEM-wide demand-weighted spot price for each half-hour during the week in question and then (ii) taking an arithmetic average of the 168 demand-weighted half-hourly prices for the week in question.

RoLRs. The next question is whether these benefits are likely to come at the expense of generators' ability to service their financial hedge contract obligations.

Impact on the generator

For the hypothetical 100 MW generator, we examined the implications of the option for three settlement weeks – these were:

- Week commencing 30th January 2011 – the week with the all-time highest NEM-wide average price ($359.43/MWh)
- Week commencing 24th June 2007 – the week with the highest NEM-wide average price during the 2007 drought period ($265.81/MWh)
- Week commencing 12th January 2014 – the week with the highest NEM-wide average price during the summer of 2014 ($102.57/MWh)

For each week, we:

- Derived the arithmetic average NEM-wide half-hourly demand-weighted price
- Derived the arithmetic average NEM-wide half-hourly demand-weighted price, assuming that all spot prices in excess of $600/MWh were set at $600/MWh
- Derived a generator's aggregate weekly spot market revenue, assuming the generator produced a flat output of 100 MW with no deferred settlement
- Derived a generator's weekly spot market revenue, assuming the generator produced a flat output of 100 MW and was paid:
  - $600/MWh when the NEM-wide average spot price exceeded $600/MWh in respect of either 20% (Scenario 1) or 30% (Scenarios 2 and 3) of its output
  - the prevailing spot price in respect of the remaining 70% or 80% of its output, as applicable
- Derived the generator's weekly contract difference payments, assuming the generator entered into swaps with a strike price of $40/MWh in respect of 80% of its capacity (which we consider to be relatively high)
- Derived the ratio of a generator's immediate spot revenue to its contract difference payments.

We found that in the most extreme week (commencing 30th January 2011):

- In Scenario 1, the generator's:
  - Weekly aggregate spot revenue was $6.04 million
  - Weekly immediate spot revenue was $5.28 million

  (Representing a deferral of $0.76 million)

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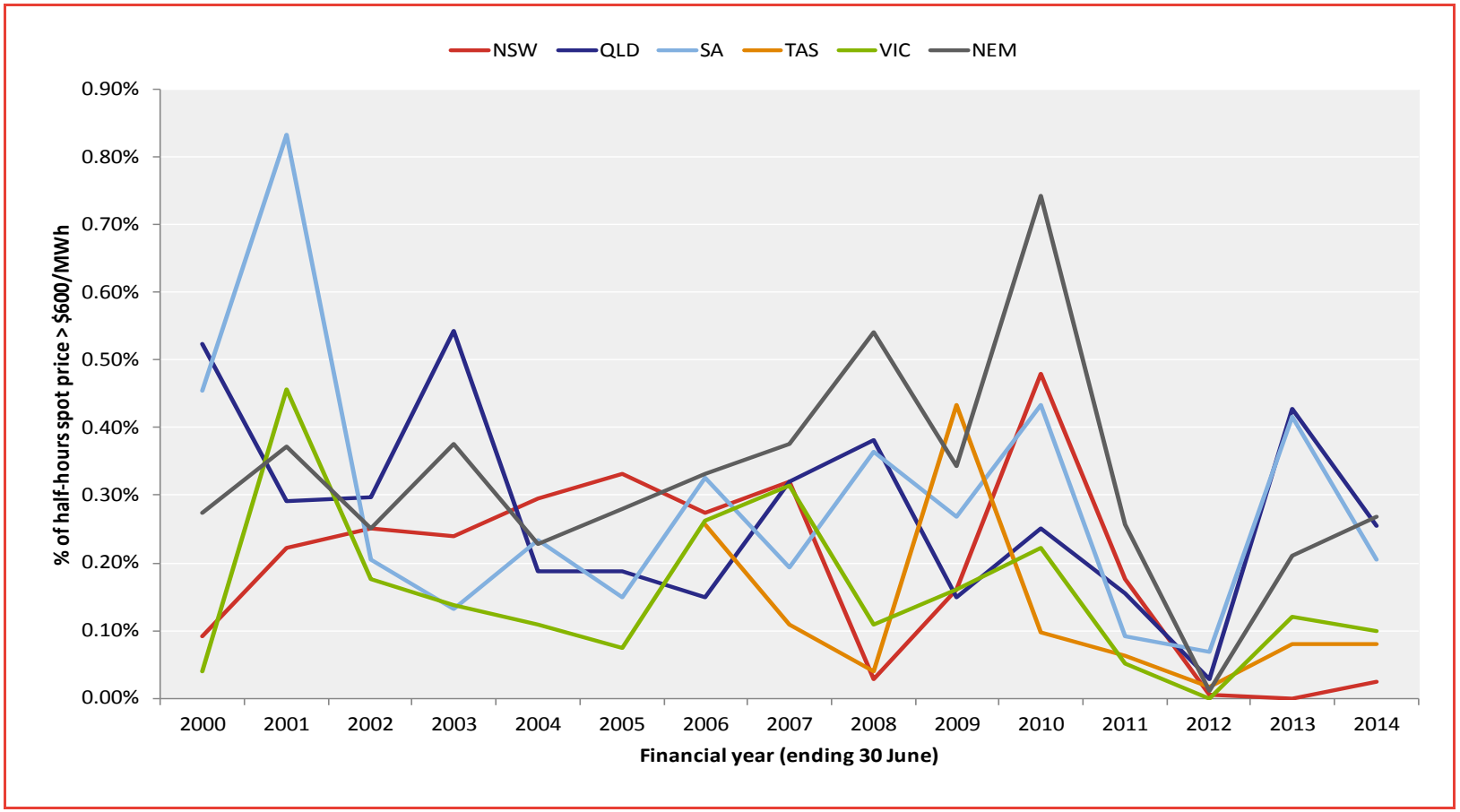
- Weekly contract difference payment (assuming an 80% flat swap with a strike price of $40/MWh) was $4.29 million
- Ratio of immediate spot revenue to contract difference payment was 123%

- In Scenarios 2 and 3, the generator's:
  - Weekly aggregate spot revenue was $6.04 million
  - Weekly immediate spot revenue was $4.90 million

    (Representing a deferral of $1.14 million)
  - Weekly contract difference payment (assuming an 80% flat swap with a strike price of $40/MWh) was $4.29 million
  - Ratio of immediate spot revenue to contract difference payment was 114.1%.

See Table 9 and Table 10 below.

Figure 2: Proportion of trading intervals where spot price >$600/MWh



Source: Frontier analysis of AEMO 30-minute price and demand data

Option 4: Temporarily reduce MPC and/or the CPT

Table 9: Impact of deferred settlement on generators – Scenario 1 (failed retailer has 20% NEM-wide market share)

Week commencing	NEM weekly average spot price[a]	NEM weekly average spot price (half-hourly prices capped at $600/MWh)[b]	Weekly aggregate spot revenue[c]	Weekly immediate spot revenue[d]	Weekly contract difference payments (80% flat swap)	Ratio immediate spot revenue to contract difference payments
30 Jan 2011	$359.43	$133.44	$6.04 million	$5.28 million	$4.29 million	123.0%
24 Jun 2007	$265.81	$161.32	$4.47 million	$4.11 million	$3.03 million	135.6%
12 Jan 2014	$102.57	$87.86	$1.72 million	$1.67 million	$0.84 million	199.0%

Source: Frontier Economics. a: half-hourly NEM-wide demand-weighted prices averaged arithmetically over the relevant168 trading intervals
b: as for (a), except all spot prices in excess of $600/MWh are set at $600/MWh
c: based on 100 MW flat output
d: based on the failed retailer's market share

Table 10: Impact of deferred settlement on generators – Scenarios 2 and 3 (failed retailer has 30% NEM-wide market share)

Week commencing	NEM weekly average spot price	NEM weekly average spot price (half-hourly prices capped at $600/MWh)	Weekly aggregate spot revenue	Weekly immediate spot revenue	Weekly contract difference payments (80% flat swap)	Ratio immediate spot revenue to contract difference payments
30 Jan 2011	$359.43	$133.44	$6.04 million	$4.90 million	$4.29 million	114.1%
24 Jun 2007	$265.81	$161.32	$4.47 million	$3.94 million	$3.03 million	129.8%
12 Jan 2014	$102.57	$87.86	$1.72 million	$1.65 million	$0.84 million	196.1%

Source: Frontier Economics. Assumptions as above.

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For all three extreme weeks across all three scenarios, the hypothetical generator received more spot revenue than the difference payments it was required to make. Note that all the caveats cited above would apply to these results. That is, the generator's spot receipts would also need to fund its fuel and other variable operating and maintenance costs. Further, to the extent the failed retailer had a larger market share or the generator was contracted to a higher proportion of its dispatched output, the generator would experience a lower coverage ratio and may be out-of-pocket.

The next section discusses further refinements that could be made to the RoLR cost recovery process to ensure that retailers would be assured of being able to promptly pass on reasonably and prudently-incurred high wholesale energy purchase costs to customers.

9 Option 5: Further clarify RoLR cost recovery provisions

9.1 Outline

This option involves further clarifying RoLR cost recovery provisions to reduce the financial exposure of the RoLR beyond the recommendations made in the First Interim Report. For example, the timing and cash-flow implications of RoLR cost recovery needs to be considered to ensure that the duration of the exposure of the market as a whole to RoLR-related costs is minimised. In addition, it is worth considering whether the cost recovery provisions could be clarified to enable RoLRs to issue cost recovery invoices more quickly. It may also be worth developing a stronger framework for when costs should be recovered from a failed retailer's customers vis-a-vis from all customers in the region(s) in which the failed retailer operated. If adopted, this framework would apply in all cases of retailer failure.

9.2 RoLR cost recovery provisions

9.2.1 NERL

The NERL requires that RoLRs supply electricity to the:

- Small customers of a failed retailer at the RoLR's standing offer prices;[44] and
- Large customers transferred from a failed retailer at prices published on the RoLR's website, which must be 'fair and reasonable'.[45]

The NERL provides that default RoLRs are entitled to recover the costs of preparing for RoLR events and that designated RoLRs can recover the costs incurred on and after a RoLR event.[46]

The NERL also requires the AER to determine the cost recovery scheme that applies to a RoLR, guided by the following principles:[47]

- RoLRs should be provided with a reasonable opportunity to recover the reasonable costs they incur

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44 NERL section 145.

45 NERL section 146.

46 NERL sub-section 166(3).

47 NERL sub-section 166(7).

- Cost recovery should allow a return commensurate with the regulatory and commercial risks of the RoLR scheme and
- RoLRs will themselves bear some of the costs in proportion to its customer base.

The NERL also provides that the AER's cost determination may lead to different tariffs paid by different customers or different customer classes.[48]

Finally, the AER is required to make a determination on how much of a RoLR's costs should be recovered from one or more DNSPs. DNSPs are entitled to recover this cost from their customers.[49]

9.2.2 AER Statement of Approach

The AER has published a Statement of Approach explaining how it intends to discharge its RoLR cost recovery determination responsibilities under the NERL.[50] We understand that the Statement of Approach was prepared with a view to the failure of small to medium size retailers rather than the 'big 3' large retailers.

Regarding costs incurred during and following a RoLR event, the AER will take into account whether a RoLR has been prudent and minimised its costs in the circumstances.[51]

The AER also considers that cost recovery should not result in onerous price shocks for small customers:[52]

> For this reason, the AER does not consider upfront fees are appropriate where the fee imposed is onerous for the transferred small customers of the failed retailer.

The AER says that the RoLR scheme benefits all market participants and so: [53]

> it [is] appropriate that cost recovery extends beyond just the customers of the failed retailer... cost recovery should occur over the largest customer base which is appropriate to the RoLR event.

The AER goes on to indicate that where a determination for RoLR cost recovery is likely to impose onerous financial obligations on a particular DNSP, the AER is likely to require several DNSPs to contribute to the costs of the RoLR scheme.

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48 NERL sub-section 166(9).

49 NERL section 167.

50 AER, *Retailer of Last Resort statement of approach, Final*, November 2011 (Statement of Approach).

51 Statement of Approach, pp.18-19.

52 Statement of Approach, p.19.

53 Statement of Approach, pp.19-20.

Section 5 of the Statement of Approach concludes with a number of examples of how the AER proposes to conduct its cost recovery determinations.

9.3 Discussion in the First Interim Report

The First Interim Report made a number of recommendations regarding cost recovery for a RoLR event, with the goal of clarifying the ability of a designated RoLR to recover its costs quickly following a RoLR event. Briefly, the recommendations relate to proposed amendments to the NERL to:

- Remove the reference to the RoLR bearing some of the costs of a RoLR event – in order to enable RoLRs to recover their reasonable and prudently-incurred costs in full.
- Provide a list of specific costs a RoLR can recover, including administration costs, energy purchase costs, credit support financing costs and general RoLR cost financing costs.
- Specify a time period (eg 3 months) in respect of which costs can be claimed.
- Specify timeframes for the AER to determine a compensation claim and for payment of the approved compensation.

The AEMC noted that one of the benefits of clearer and more certain cost recovery arrangements was that more retailers may offer to act as additional RoLRs and RoLRs could find it easier to obtain financing and increased credit support, thereby enhancing the competitiveness of the long term (post-RoLR event) structure of the market.[54] Most stakeholders supported increasing the certainty of cost recovery arrangements, although the AER noted the tension between certainty and ensuring that only reasonable costs could be recovered.[55]

9.4 Analysis

An important component of the changes recommended in the First Interim Report is that RoLRs will not be expected to bear any reasonable and prudently-incurred RoLR costs themselves. Rather, RoLR-related costs will be recoverable from end-use customers in one form or other.

9.4.1 Timing of cost recovery

The First Interim Report also recommended that RoLRs should be able to recover their increased costs quickly, by obliging the AER to determine compensation claims within a clear timeframe. The NERL presently does not

54 First Interim Report, p.61.

55 First Interim Report, Appendix A, pp.90-91.

provide a timeframe for the AER to determine a cost application, other than that interested parties must be given at least 20 business days to comment on a costs application.[56] This suggests that a reasonable timeframe for the AER to determine appropriate cost recovery is likely to be no less than two months after the application is submitted, which in itself could be well after the transfer of the failed retailer's customers occurs. Given the magnitude of costs likely to be involved and in light of our recommendation (see below) that all RoLR-related costs should be recovered from all customers through DNSP charges, it would be inappropriate to impose strict timeframes that constrained the thoroughness of the AER's assessment of the costs incurred by RoLRs.

However, it may be appropriate to permit RoLRs to make an interim application for costs to the AER and to oblige the AER to make an interim determination on that application within a short period of time; say two weeks. The AER could have discretion to allow part or all of the estimated costs to be recovered from DNSPs, subject to later revision when the AER adjudicates on a full final costs application. There are potentially three benefits of an interim determination:

- First, it would speed up the process of recovering RoLR-related costs from end-use customers, because instead of these costs only starting to be recovered three or more months after the RoLR event (following a final costs determination), customers could be required to start contributing to these costs within, say, two months of the event.
- Second, a greater degree of certainty over cost recovery should assist RoLRs in procuring increased financial accommodation from lenders to fund credit support and wholesale market obligations. This benefit would accrue to RoLRs even before the costs determined by the AER had started being invoiced to customers.
- Third, to the extent that the AER determined that DNSPs would be required to make payments to the RoLR before the DNSPs were able to recover those costs from their customers, the DNSPs would, in effect, be extending credit to RoLRs through the DNSPs' working capital. Sharing the need for increased funding across both RoLRs and DNSPs would help to reduce cashflow stresses on RoLRs.

In respect of any AER determination on costs (whether interim or final), it is important to ensure that market participants do not remain exposed for longer than strictly necessary to cashflow imposts that will ultimately be recovered from

56 NERL sub-section 166(5).

customers. Therefore, it would be appropriate for any AER-approved RoLR-related DNSP charges to:

- Not form part of DNSPs' outstandings in such a way that could influence retailers' credit support obligations to DNSPs; and
- Be billed immediately by the relevant DNSPs to their customers (via retailers) and then effectively be passed-through immediately by retailers to the relevant RoLR(s) once paid by end-customers, by-passing the DNSP altogether.

The pass-through of RoLR-related costs by DNSPs to customers via retailers raises the issue of how this would affect customers with fixed-price retail contracts. Without examining this issue in detail, it appears that most cases, retailers' standard offer and market contracts provide for 'additional charges' levied by distributors, governments or regulators to be passed-through to customers outside of published or gazetted retailer tariffs for the sale of energy.[57] Even Origin Energy's 'RateFreeze' contract allows for such charges.[58]

Two other key matters remain unclear following the First Interim Report:

- the extent to which RoLR costs should be recovered from the failed retailer's customers as opposed to customers at large in the region in which the failed retailer operated; and
- how the AER will judge what constitutes reasonable and prudent costs for a RoLR to pass-through to customers (including via DNSP payments).

These are discussed below.

9.4.2 Allocation of cost recovery

The First Interim Report summarised the AER's principles for cost recovery from different failed retailers' customers – as derived from the AER's Statement of Approach – as follows:

- As the RoLR scheme benefits all market participants, it is appropriate that cost recovery should extend beyond the customers of the failed retailer.

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57 See, for example, Origin Energy's definition of 'Additional charges', which includes 'Other charges': "If a government, regulator or network distributor varies or introduces a fee, charge or tax, we may pass through all or part of this varied or new fee, charge or tax to you." See: http://www.originenergy.com.au/2402/Additional-charges . See also, AGL's 'General Terms' clause 6.1(b)(ii): http://www.agl.com.au/~/media/AGL/Residential/Documents/Plans%20and%20Pricing/2014/AGL_Energy_Plan_General_Terms_14.pdf

58 See: http://www.originenergy.com.au/files/necf/VIC_Electricity_Residential_Citipower_Origin%20Rate%20Freeze.PDF

- In the event of a small retailer failure, the customers of the failed retailer should bear a greater proportion of the costs (such as administrative costs) with the remainder recovered through a distributor payment.
- In the event of a large retailer failure, the AER may opt for the entire cost recovery to be managed through distributor payments to spread the costs across a wide customer base and minimise impacts. This could be effected through a combined upfront fee and a DNSP payment determination.

Energy purchase costs and other ongoing costs

In our view, to the extent that RoLR-related costs are to be recovered from the failed retailer's customers in cases where a small or medium-sized retailer has failed, we consider that the increased energy purchase costs and other ongoing RoLR-related costs should be recovered from customers of the failed retailer *in all cases*, subject to some cap to help manage small customer impacts. This is because where a large retailer has failed, there will be many former customers across whom ongoing RoLR-related costs can be recovered. There is no obvious reason why RoLR-related ongoing costs ought to be higher on a per-customer or per-kWh supplied basis where a large retailer has failed than where a small retailer has failed. If anything, to the extent that ongoing RoLR costs exhibit some economies of scale – for example, procuring increased credit support may become cheaper on a per dollar of credit support basis as the total amount of credit support required increases – per customer or per kWh costs should fall as the size of the failed retailer increases.

This analysis puts to one side the question of whether *any* RoLR-related costs should be recovered from the customers of the failed retailer as opposed to from all retail customers in a region or across the NEM. The appropriate answer to this question turns on whether there are any important incentive effects created by the allocation of RoLR-related costs.

On one hand, end-use customers should not have to think about the risk management prudency of their electricity retailer. Electricity customers are not well placed to assess their retailer's prudency and so there is little benefit in making them financially accountable for the cost consequences of their retailer failing due to, say, undertake adequate wholesale hedging. Therefore, there appears to be no moral hazard rationale for making the customers of a failed retailer (whether large or small) pay any costs beyond to those levied on all customers.

On the other hand, it cannot be disputed that customers that are transferred to (and remain with) a RoLR are responsible for the RoLR incurring ongoing costs. This suggests that transferred customers should face some price signal to encourage them to either:

- enter a formal retail contract with the RoLR to better enable the RoLR to plan and manage its costs to serve; or
- sign a contract with an alternative retailer.

The likely responsiveness and hence efficacy of providing such price signals is likely to vary by size of customer. Small customers may not act to enter a contract with the RoLR or with another retailer in response to higher tariffs in the short term. However, large customers are more likely to have the means and willingness to enter a new contract soon after being transferred to the RoLR. This suggests that appropriate cost allocation arrangements could vary by customer size/type.

Further, it is quite possible that the customers of a failed retailer would have benefitted somewhat through lower retail tariffs by the (lack of?) commercial and hedging strategies of their former retailer. While not relevant to economic efficiency, allocating some RoLR-related costs to these customers would not seem inconsistent with common notions of equity.

The balance to be struck between these competing perspectives is not obvious. But in any case, where the balance is struck should not depend on the size of the failed retailer.

Administrative costs of transfer

Given that the administrative costs of transfer are one-off costs that the failed retailer's customers could not be expected to anticipate, there seems to be little in the way of a compelling incentive or efficiency rationale to allocate these costs to the customers of the failed retailer.

Further, as the absolute value of the administrative costs of handling a mass customer transfer are likely to vary little with the size of the failed retailer, allocating these costs to the customers of a failed retailer would tend to lead to higher per-customer costs on the customers of small failed retailers than on the customers of large failed retailers. There seems to be no good reason to discriminate against small retailers and their customers in this manner.

9.4.3 AER assessment of reasonableness and prudency

The second issue that needs to be resolved is how the AER ought to judge what constitutes reasonable and prudent costs for a RoLR to pass-through to customers (including indirectly to all customers via DNSP payments).

Assessing the prudency of RoLR-related costs is likely to create significant challenges for the AER. At least for the costs of increased AEMO and DNSP credit support requirements, it may be possible for the AER to compare the increased costs incurred by a RoLR against the costs incurred by other retailers. Even then, the AER's assessment should take account of the limited time frame

available to DNSPs to negotiate such increased credit support requirements. The AER has already indicated through its Statement of Approach that it will tend to scrutinise the costs claimed by default RoLRs of preparing for a RoLR event more carefully than it will scrutinise the costs of designated RoLRs incurred during and after a RoLR event.

RoLRs' increased wholesale purchase risk management costs are likely to be even harder for the AER to assess than their credit support costs. Given that there is no minimum (or maximum) period for small customers to remain with a RoLR and be supplied at standing offer tariffs, RoLRs will face a difficult task in estimating their ongoing load hedging requirements following the transfer of a large number of a failed large retailer's customers to them. The RoLR will need to estimate the likelihood that these transferred customers will soon switch again to another retailer or stay with the RoLR. This might depend on the nature of the failed retailer: the customers of a failed aggressive new entrant retailer are likely to be more inclined to promptly switch again than the customers of a failed large incumbent retailer. A RoLR that enters into a hedge contract for the full additional load associated with the transferred customers but then experiences the drifting of the failed retailer's customers away to other retailers may find itself involuntarily over-hedged. Under these conditions, the AER may be unwilling to allow the RoLR to recover its increased hedging costs on the grounds that the RoLR's decision to hedge the full additional load was not prudent. Alternatively, the AER will likely be unwilling to allow a RoLR that chooses not to hedge its increased load to recover the full amount of its additional wholesale purchase costs (potentially made at very high spot prices). More generally, the AER will effectively be in the position of second-guessing the RoLR's commercial strategies in a highly uncertain environment.

9.5 Conclusion/recommendations

On balance, we propose that the cost recovery arrangements should allow RoLRs to recover all reasonable and prudent RoLR-related costs:

- attributable to small retail customers from all small retail customers through DNSP payments. DNSPs should then be obliged to recover these costs from all their small customers (only); and
- attributable to large customers from those large customers,

in respect of a period of up to 3 months from the receipt of the transferred customers following a RoLR event.

This recommendation is made on the basis that customers have no control over the original cause of RoLR-related costs and cannot be expected to take the risk management strategies of a retailer into account when choosing a retailer. However, large customers are likely to have greater scope to take actions to minimise RoLR-related costs by entering into a formal contract with the RoLR or

another retailer soon after the RoLR event. The NERL recognises this difference by providing more flexible provisions for the terms and conditions applicable to RoLRs' supply to large customers than applicable to small customers.[59]

Although a RoLR's supply to transferred customers is likely to impose costs above those required to serve the RoLR's existing customers, the magnitude of these additional costs is likely to decline over time. For example, it is likely that a RoLR's costs of seeking increased wholesale hedging cover in respect of transferred customers will be high in the days and weeks following a retailer failure, especially given that such failures will typically be preceded by high spot prices. However, after a period of several months, the costs of hedging the load of the transferred customers should not be greatly different to the RoLR's costs of hedging its native customer load. We consider that three months should be a reasonable period by the end of which RoLRs' ongoing costs to serve transferred small customers should approach the costs of serving their existing standing offer customers, especially in the current market in which competitive retail contracts offer tariffs well below standing offer tariffs. Therefore, we consider it reasonable that RoLRs should be able to claim the recovery of reasonable and prudent RoLR-related costs in respect of the period within three months following their receipt of the failed retailer's customers.

Nevertheless, any 'cut-off' time for recovering RoLR-related costs could create perverse incentives for RoLRs to enter expensive short-term contracts – in effect to 'front-load' their costs – in the hope or expectation that cheaper contracts will be available after the cost recovery period, rather than enter reasonably-priced longer-term contracts immediately after the RoLR event. We propose that the AER should have discretion to allow the recovery of costs beyond the initial three-month period where the RoLR can provide strong evidence that it was prudent to do so.

It is likely to be difficult to impose a strict timeframe for the AER to determine a RoLR cost application, given the AER may need to seek additional information from the RoLR more than once and the RoLR will need time to respond. However, RoLR applicants could seek to apply for an interim costs determination from the AER based on their estimated costs prior to seeking a full determination. Any interim determination should be granted on the basis that it is made to serve a cashflow purpose only and that any costs permitted to be recovered could be clawed back from the RoLR or set-off against the other costs allowed in a subsequent full determination. Amounts to be recovered from DNSP charges should be passed-through immediately by all retailers serving customers within the DNSP's area to the relevant RoLR(s) once the amounts have been received.

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59 NERL sub-section 146(3).

As for what costs are prudent and reasonable, we are comfortable with the AER's indication that it will not impose too high a hurdle on RoLRs' costs incurred during and after a RoLR event, due to the difficult circumstances likely to surround such events. The key consideration is that the AER should not seek to be too 'wise after the event', especially given that designated RoLRs who were not default RoLRs are not entitled to recover any preparation costs such as entering into swaptions or similar instruments that could greatly increase the certainty and reduce the costs of arranging hedge cover in the event that a RoLR event occurs.

Finally, clause 3.3.8 of the NER should be amended to require that the form of cost recovery arrangements under the RoLR arrangements feeds into AEMO's determination of prudential settings. In this way, greater clarity over RoLRs' ability to recover their RoLR-related costs could help to mitigate increases in their prudential obligations to AEMO following from the transfer of the failed retailer's customers.

10 Option 6: Increased monitoring of RoLRs

10.1 Outline

This option involves placing designated RoLRs under a form of ongoing monitoring by the AER from the time they are appointed until the end of the period in respect of which they are entitled to seek recovery of their RoLR-related costs (which we recommend to be three months following the event). The form of monitoring could be fairly 'light-handed', in that it would provide an opportunity for the supervising party to express concerns or signal an objection to certain behaviours rather than provide the monitoring party with the power to mandate or veto certain behaviours. This option would only apply in the case of the failure of a 'systemically important market participant'.

10.2 Current RoLR supervision

The NERL does not provide for RoLRs to be monitored in any way during the period in respect of which they can make a costs application (which we recommend to be three months from the date that the failed retailer's customers are transferred to the RoLR). The only form of monitoring of RoLRs occurs indirectly through the AER's cost determination process. As noted above, the AER is required to ensure that RoLRs only recover costs from customers or from DNSPs that have been incurred reasonably and prudently.

10.3 Discussion in the First Interim Report

This option was not raised in the First Interim Report.

10.4 Analysis

RoLRs may appreciate the additional certainty that could come with being placed under some form of formal monitoring following the receipt of a failed retailer's customers. In the short term at least, there would be no alternative but for the monitoring party to be the AER. In this way, the party ultimately making the costs determination applicable to the RoLR (ie the AER) would also be aware of the RoLR's key decisions driving its outturn RoLR-related costs. While this awareness would not bind the AER to approve particular costs, it could provide both the AER and the RoLR with greater confidence that a subsequent cost application will be reasonable and hence acceptable.

The case in favour of placing RoLRs under some form of monitoring would be strengthened if our recommendations to further defer AEMO and DNSP credit support obligations and to defer market settlements in respect of spot prices in

excess of $500/MWh are adopted. These recommendations would greatly increase the 'value-at-risk' to the market as a whole from a RoLR for a significant period of time. Imposing some form of monitoring would help provide some reassurance to other stakeholders that their increased exposures to the RoLR were being somewhat balanced by greater oversight of the RoLR's activities.

The key types of decisions that we anticipate a RoLR may choose to inform the AER about could include:

- Decisions to enter, exit or vary significant exchange-traded or OTC contracts for the purpose of hedging the increased load attributable to the transfer of customers from the failed retailer.
- Decisions regarding the terms of the procurement of AEMO and/or DNSP credit support to meet NER obligations.

The key disadvantages of a monitoring regime applying to RoLR are twofold. First, it would effectively invite the AER into a RoLR's boardroom and perhaps inevitably lead to the AER micromanaging decisions about which they have little expertise.

Second, and relatedly, it would require considerable AER resources for those relatively short periods in which the monitoring regime operated.

10.5 Conclusion/recommendations

This option offers some attractions in a world of imperfect solutions, while also giving rise to a number of practical problems. The attractions are that under conditions of physical and financial stress in the NEM, it could be worthwhile for RoLRs to at least inform the AER of their proposed actions to mitigate the risks and costs of serving the customers of a large failed retailer. Even if the AER is not willing to give its imprimatur to any of these actions prior to a formal application for costs, it will be aware of the RoLR's intentions and may choose to comment if it has strong objections to a proposed course of action.

The practical problems with this option are that the AER would likely lack the expertise and resources to provide any timely comments or advice on a RoLR's risk management strategies. Alternatively, it may set a precedent for other situations where the AER considers it appropriate to intervene in the operational decisions of a market participant.

Appendix A – Current default RoLRs

Table 11: Electricity RoLRs

Jurisdiction	RoLRs
Australian Capital Territory	ActewAGL Origin Energy (Essential Energy customers)
New South Wales	EnergyAustralia Origin Energy ActewAGL Sun Retail (Ergon Tenterfield customers)
Queensland	Origin Energy (Essential Energy customers) Sun Retail
South Australia	AGL
Victoria	AGL EnergyAustralia Origin Energy

Source: National Energy Retail Regulations, Schedule 4.

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