AEMC

REVIEW

Australian Energy Market Commission

SECOND INTERIM REPORT

NEM financial market resilience

14 August 2014

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Second interim report

Inquiries

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About the AEMC

The AEMC reports to the Council of Australian Governments (COAG) through the COAG Energy Council. We have two functions. We make and amend the national electricity, gas and energy retail rules and conduct independent reviews for the COAG Energy Council.

Executive summary

In response to a request for advice from the Council of Australian Governments (COAG) Energy Council, the Australian Energy Market Commission (AEMC or Commission):

- has identified and assessed the risks to financial system stability in the National Electricity Market (NEM) arising from the interdependencies between market participants;
- has reviewed the adequacy of current arrangements to manage those risks; and
- recommends a package to improve the resilience of the NEM to manage and respond to the financial distress and failure of participants.

Background

Generators, retailers and other businesses that participate in the NEM have complex financial relationships with each other. There are different channels through which financial payments flow to and from market participants. These financial interdependencies contribute to the efficient operation of, but also introduce potential risks to, the flow of funds between participants so that the buying and selling of electricity in the NEM continues to operate as intended. This is referred to as financial system stability in the NEM.

The financial interdependencies between market participants mean that one participant experiencing some form of financial distress can affect others. If this becomes extreme, it is referred to as financial contagion. Financial contagion has the potential to threaten financial system stability in the NEM through causing the cascading failure of multiple participants. In such circumstances, the financial relationships that support the efficient operation of the NEM could break down.

Financial system stability in the NEM is dependent upon the market being able to absorb shocks. Whilst the likelihood of such shocks is uncertain, the failure of a large market participant could have severe flow-on effects in the market. This would include damage to consumer and investor confidence. In the extreme, financial system instability could compromise the physical supply of electricity and the achievement of the national electricity objective and the national energy retail objective.

Context for advice

The NEM has operated effectively, with businesses entering and exiting the market without disrupting financial system stability. NEM financial markets are generally robust and have been able to evolve to accommodate major events and changes in market circumstances. While recognising the strong track record of the NEM to date, the importance of ensuring the effective functioning of financial flows within the NEM make it timely to carry out this work.

Events over the past years, such as the global financial crisis, have caused policy makers and regulators to reconsider their approaches to financial system stability and risk management.

The environment in which the NEM operates has evolved significantly since market start, including in terms of the industry structure and regulatory obligations that apply. The range of challenges that the NEM has faced, and may face over the coming years, increases the importance of:

- understanding risks to financial system stability in the NEM; and
- being prepared to manage and respond to those risks, should they materialise.

Financial market resilience and other Commission work

We need a resilient, sustainable market, which is able to support economic growth. This is reflected in one of our strategic priorities: developing market arrangements that encourage efficient investment and flexibility. The market should be capable of responding to the challenges presented to it.

This financial market resilience advice can be seen as part of a broader package of work that the Commission is undertaking to develop the energy market to face the future. Other such projects include the optional firm access model development and assessment as well as the competition in metering and related services rule change request.[1]

Our approach

Our recommendations seek to target the priority areas in the context of maintaining financial system stability in the NEM. These areas are managing, and responding to, the failure of a large participant in the NEM.

In responding to the request for advice, we have been informed by the national electricity objective and the national energy retail objective. We are only proposing a measure if:

- existing arrangements need to be enhanced; and
- implementation of the measure targets the priority areas for maintaining financial system stability in the NEM and would be likely to promote efficient investment in, and efficient operation and use of electricity services for the long term interests of consumers.

The COAG Energy Council's request for advice states that market participants need to manage their own financial and commercial positions. Our recommendations seek to maintain commercial incentives on participants to manage their own risks to the extent that they can, and to allocate risks to the party best able to manage them. The aim is not to prevent an individual participant failing or leaving the market; rather the focus is on maintaining the continuity of supply to consumers and the stability of the NEM as a whole.

Our recommendations seek to minimise the expectation of government financial support when there are risks to financial system stability in the NEM. Market

1 AEMC, *Optional Firm Access, Design and Testing*, EPR0039; and AEMC, *Expanding competition in metering and related services rule change*, ERC0169. More information on these projects can be found on the AEMC website: www.aemc.gov.au.

arrangements should not foster any perceived expectation that governments would step in and support participants when risks to financial system stability in the NEM occur.

Having in place appropriate and planned market responses is one way to achieve this, and minimise the likelihood of government support being required. This point has been made in a report published as part of the current inquiry into the Australian financial system.[2]

Risks to financial system stability in the NEM

Financial interdependencies – OTC contract counterparty default

The three main channels through which market participants in the NEM are financially interconnected are:

- in the spot market, via the settlements process that is managed by the Australian Energy Market Operator (AEMO). In particular, generators are dependent on retailers making payments for the purchase of electricity through the spot market;
- through ASX 24, which is a centralised exchange that offers standardised electricity derivative products. Exchange traded derivatives are used to manage the risk of variations in spot prices; and
- through bilateral over-the-counter hedge contracts (OTC contracts) between participants and sometimes intermediaries. Participants also use OTC contracts to manage the risk of variations in spot prices.

Of these relationships, OTC contract counterparty default creates the most likely potential risk to financial system stability in the NEM. A failure of a counterparty to meet its OTC contract obligations could result in other participants:

- being exposed to spot prices for a substantial part of their retail load or generation capacity; and
- experiencing losses associated with a counterparty failing to meet payments under its contract obligations.

While the probability is uncertain, there is a risk of financial contagion occurring through OTC contract counterparty default. Whether this would occur and threaten financial system stability in the NEM would depend on a broad spectrum of variables at the time, including:

- whether the participant holds sufficient capital reserves to absorb the impact of financial shocks and could obtain additional funding to manage any short term cash flow impacts;
- whether the default coincides with other unfavourable events occurring. For example, high spot prices together with generation plant outages and a squeeze on the general availability of credit, would magnify the impacts of a counterparty default. Such events tend to be unexpected and not reflective of normal market conditions; and

2 The Financial System Inquiry 2014 (Murray), *Interim Report*, 15 July 2014, pp3-9.

- the degree of concentration of hedge contracts between participants. Where there are fewer participants, the concentrations of hedge contracts held by each participant would likely be higher and the impacts of the counterparty default could be more severe.

The risk of financial contagion occurring would be more likely where a retailer has a high concentration of hedge contracts with a large generator and that generator defaults on its OTC contracts. A generator experiencing counterparty failure would generally not suffer as extreme a financial loss as a retailer, primarily because of the highly asymmetric nature of spot prices.

For the spot market and exchange traded derivatives, arrangements are in place to manage, respectively, the risk of settlement shortfall and counterparty default. Such arrangements:

- act to diversify the risk of participant failure across a large number of businesses and, the impacts are, therefore, not concentrated on a single participant. For example, under the AEMO settlement process, all generators are exposed to any shortfall in settlement payments; and
- include financial requirements on participants to build up financial reserves (eg, credit support or margining requirements). Such reserves act as a buffer to protect against, and absorb, impacts of a participant failing.

Retailer of last resort scheme

The retailer of last resort (ROLR) scheme applies in the case of a suspension of a retailer from the NEM. This scheme is intended to enable continued supply to, and orderly transfer of, the failed retailer's customers while preserving the integrity of the settlement of the spot market. It is triggered upon declaration of a ROLR event by the Australian Energy Regulator.

A threat to financial system stability in the NEM would arise if a large retailer experienced financial distress and triggered the application of the ROLR scheme in its current form. This is because of the additional financial obligations placed on a ROLR if it acquires a large number of customers, to be met in a very short timeframe. If these obligations cannot be met by the ROLR(s), further failures may occur.

The key challenges for a ROLR are:

- **Cash flow risk**, that is, that the ROLR would not be able to meet payment obligations due to a mismatch between the timing of money received and payments due. The ROLR would need to make additional purchases of electricity in the spot market to cover the inherited retail load, and would also initially be unhedged. As market settlement occurs roughly four weeks in arrears, the ROLR would have to find the additional cash required for settlement within that time. Retailers commonly invoice residential customers every quarter in arrears, but would be incurring the costs of purchasing electricity in the spot market for the transferred customers during those three months. If spot market prices were high, this burden could be compounded; and
- **Additional credit support** in relation to the acquired customers, which must be provided to AEMO and may be required by distribution network service

providers. Under the current rules, such credit support is required within short timeframes. If the ROLR event occurs at a time when the financial market faces a degree of distress, it may be difficult to find sources of finance, or finance may be provided at a higher cost than under normal circumstances.

In addition, there are likely to be **information and systems challenges** involved in transferring large numbers of customers. If customer information is not transferred efficiently from the failed retailer to the ROLR, it would inhibit the ROLR's ability to hedge the new load, and to establish effective customer communication and billing arrangements.

Identifying and mitigating in advance risks to financial system stability in the NEM

There are arrangements in place that seek to identify and mitigate in advance risks to financial system stability in the NEM. The most important of these are market participants' risk management practices.

It would be inappropriate to assume such practices can be solely relied on, or expected, to eliminate all risk to financial system stability in the NEM. Even with very diligent risk management by participants, there could still be a remaining risk, because:

- a participant's incentives to manage risk carefully would not necessarily take account of the potential systemic consequences of their failure;
- the potential for participant failure to trigger financial contagion would depend on a wide range of factors and the circumstances at the time, all of which are difficult to quantify or judge in advance;
- risk management practices are unlikely to allow for the additional liabilities associated with becoming a ROLR under a large retailer failure situation;
- industry structure may limit the possibility for participants to adequately diversify risk among a wide number of counterparties; and
- it would be impossible for participants to have all the information needed to correctly assess the probability of counterparty failure under OTC contracts and the impacts of such a failure on their businesses.

Most participants maintain an Australian Financial Service Licence. The obligations imposed on the holders of this licence are designed to require companies to have the financial and corporate ability to implement their compliance functions and meet their legal obligations, but not to minimise systemic risk. Requirements under the Australian Financial Service Licence do not aim to preserve financial system stability in the NEM.

Managing and responding to threats to financial system stability in the NEM

Under current arrangements, the ROLR scheme is the main mechanism to respond to a retailer failure in the NEM. In addition, there are a number of other arrangements that apply in response to a participant experiencing financial distress or failure. They include market suspension provisions under the National Electricity Rules, applied by AEMO, and revocation of retailer authorisations and related decisions under the National Electricity Retail Law, made by the Australian Energy Regulator (AER).

We have already identified the application of the ROLR scheme as a source of risk to financial system stability in the NEM in the case of a large retailer failure.

These other arrangements are not adequate for responding to a large participant failure, because:

- a large participant failure would be complex, and the circumstances would be different in each case. Managing such a failure would require a clear and flexible 'toolkit' of potential response options from which to choose. Any response would need to be tailored to the specific case of the defaulting participant and the market situation at that time. This is not available under current arrangements;
- in the event of a large participant failure, decisions need to be made in a coordinated manner in order to avoid contradictory outcomes. In the current arrangements, there is no comprehensive framework for decision-making and coordination across all relevant governments and market bodies;
- responding to a large participant failure would require consideration of a wide range of issues. Under the current arrangements, there is a risk that not all relevant issues, including financial market stability considerations, could be taken into account by the various decision-makers, and on the basis of the information available to them; and
- governments would be critically interested in a large participant default and would seek to maintain consumer and market confidence and ultimately, if needed, step in with support. There is no formal, institutional structure for involving and advising government.

Improving the resilience of the NEM

We conclude that counterparty default under OTC contracts is a source of risk to financial system stability in the NEM. This risk would be greater where the participant experiencing the counterparty default is a large retailer. Another source is the application of the ROLR scheme to a large retailer failure. The current arrangements for managing and responding to threats to financial system stability in the NEM are inadequate. Mechanisms to identify and mitigate those risks to financial system stability in the NEM are limited.

Given this, we have considered additional regulatory measures that seek to reduce the probability of financial contagion through counterparty failures, by identifying and mitigating risks in advance. They included prudential regulation, mandatory stress testing and increased transparency measures.

Currently, the case is not established for mandating such additional measures in the NEM, for the following reasons:

- Introducing such measures would require substantial resources and expertise to be effective. The costs of doing so would likely outweigh the potential benefit of reducing risk in the NEM.
- The nature and magnitude of risks to system stability in the electricity sector differ from those in the financial sector, where such measures are common.

- The measures would not address a key source of financial contagion in the NEM - the ROLR scheme.

Also, we consider that the case for implementing the proposed reforms relating to OTC derivatives developed by the G20 countries for electricity participants has not yet been made.

Attention should be focussed on improving the resilience of the NEM to withstand future challenges. In this regard we propose a package to improve how market arrangements manage and respond to the failure of a large participant.

We also propose amendments to the ROLR scheme, so that it can operate in a broader set of circumstances without exacerbating risks to financial system stability in the NEM. In addition, we propose rule changes to clarify the market suspension provisions in the National Electricity Rules.

The package of reforms is presented in this second interim report at the principle level. This report highlights some of the questions that would need to be addressed when implementing these recommendations.

Framework for managing and responding to a failure of a systemically important market participant

The key elements of the proposed new set of arrangements to manage and respond to the failure of a large participant are:

- Participants whose failure, because of the size of their retail loads, would cause significant and immediate financial disruption to the electricity market and would likely threaten financial system stability in the NEM, should be classified as 'systemically important market participants' (SIMPs).
- The establishment of a separate framework to facilitate a timely, proportionate and suitable response to a SIMP experiencing significant financial distress or failure (collectively, SIMP failure). For other participants, the current arrangements, appropriately enhanced by our recommendations in this report, would continue to apply.
- All of the decisions on the management of, and response to, a SIMP failure should be gathered to, and made at, a single decision-making point. To facilitate this, decisions regarding suspension and revocation of retailer authorisations that are currently taken by AEMO and the AER would also be made at that single decision point.
- Decision-making would be guided by an objective to maintain financial system stability in the NEM by minimising the impact of the failure of a SIMP on consumers and the market in accordance with the national electricity objective and the national energy retail objective.

Given the extreme nature of such a situation, decision-making would best be held by a body that has overall responsibility for the market. Under the current NEM governance arrangements, government has responsibility for the market as a whole and can take into account the factors and considerations relevant to the circumstances. Government is best placed to make these decisions.

Within government, there needs to be a single decision-maker, for accountability and transparency. Due to the national character of SIMPs, the Chair of the COAG Energy Council should be the ultimate decision-maker, in close cooperation with State and Territory energy ministers.

The key decisions to be made under the proposed framework would be:

- subject to certain conditions being met, whether to allow the SIMP time to rectify its financial situation. This would enable all viable market-based solutions for resolving the situation to be explored before any regulatory arrangements may have to be applied; and
- where the SIMP must be suspended from the market, a choice between applying the ROLR scheme, or an alternative stability arrangement. For the latter, see below.

To assist government in decision-making, we recommend that relevant market bodies provide advice in a collective and coordinated way, through a 'NEM Resilience Council'. It would comprise the AER, AEMO, the AEMC and the Australian Securities and Investment Commission.

Amongst other things, the Council would:

- advise on the best course of action where a SIMP has failed;
- escalate instances where a SIMP may be imminently facing financial distress, and prepare advice for government when it becomes aware of such circumstances; and
- consider potential risks to financial system stability in the NEM on an ongoing basis.

Alternative stability arrangements

Even taking into account our recommendations below, the ROLR scheme may not be effective in all situations of a SIMP failure. In addition, external administration under Australian law cannot be relied upon to ensure an outcome consistent with policy objectives to provide continuity of supply to customers, and to maintain financial system stability in the NEM.

In the absence of a plan for how to manage and respond to a SIMP failure, the stability of the NEM could be threatened and the expectation for government to intervene could arise. Without planning, government intervention could be costly, inappropriately targeted, and not effective.

For this reason, there is merit in having a place an alternative - which we have termed stability arrangements - which could apply when a SIMP fails. This would involve a form of special external administration or management. There are precedents for establishing specific forms of external administration to address particular industries or important State interests to deal with situations that are not able to be satisfactorily dealt with by traditional forms of external administration – examples include the judicial management regime for the Australian insurance sector and the special administration regime for energy supply companies in Britain.

Further work needs to be undertaken to develop stability arrangements as an alternative to the ROLR scheme when a SIMP fails. The aim of stability arrangements would be to manage and respond to the failure of a SIMP while the continuity of supply to consumers, the integrity of the wholesale market, and financial stability in the NEM are maintained.

Given the breadth of issues raised when considering potential stability arrangements, including insolvency processes and the potential for significant funding requirements, we are not making detailed recommendations about the design of suitable stability arrangements.

Any stability arrangement would require a package of legislative changes and funding provisions, extending beyond the electricity regulatory framework. The assessment, design and implementation of stability arrangements would be complex and would need to involve a range of stakeholders, both within the electricity sector and outside it. It would also involve trade-offs between different interests which are a matter for public policy and best considered at government level.

We recommend that the COAG Energy Council request energy departments, in consultation with Commonwealth, State and Territory Treasuries, to form a working group to develop the detailed design of stability arrangements for the NEM, incorporating a form of special external administration.

ROLR scheme

The proposed changes to the ROLR scheme target the cash flow and additional credit support challenges faced by a ROLR. If implemented, financial shocks to the NEM could be absorbed more readily through a more effective sharing of the risk across the market. In summary, our draft recommendations involve:

- changes to the ROLR scheme to reduce the impact of increased cash flow and/or credit support requirements, through:
  - revised ROLR cost recovery arrangements, to give the designated ROLR greater certainty that it can quickly recover its costs, by clarifying the type of costs allowed and recommending that the AER make a provisional assessment of ROLR costs within a short timeframe where these costs are substantial;
  - delayed designation of ROLRs, to increase the potential for the AER to appoint multiple ROLRs;
  - limiting the extent to which the ROLR arrangements apply to very large customers, who will have the opportunity to negotiate their own back-up retailer should a ROLR event occur;
- changes to credit support arrangements to reduce the impact of the ROLR's increased credit support requirements, through:
  - delaying additional credit support requirements for AEMO and for distribution network service providers; and
- continued efforts by AEMO and AER to improve information and systems to enable the smooth transfer of customers.

Market suspension provisions under the NER

We recommend that the NER be clarified to allow the possibility of not suspending a participant, or parts of its activities, from the market when it is under external administration. To minimise the risks to the market and other participants, this should only occur provided a number of conditions are met.

The current NER give rise to uncertainty as to whether a generator could remain operating in the market if it is in administration or if it is part of a registration that includes a retail business and that business was suspended, or is itself in administration. It could however be beneficial for reasons of financial or physical market stability to allow the generation assets to remain operating in the market in such a situation.

The need for reform

Responding to the failure of a large retail business would require consideration of many issues within a short time. These include financial stability considerations, broader consumer and investor confidence, competition impacts and factors outside the energy market. The purpose of this framework is therefore to facilitate a timely, proportionate and suitable response when a risk to financial system stability in the NEM arises.

In doing so, the market would be better prepared and more capable to withstand challenges. There would be more options available to respond to the failure and an improved ability to make appropriate, timely decisions.

Under the proposed recommendations, the need for government support would be minimised and only used as a last resort, after opportunities for commercial solutions have been explored.

Implementation of proposed recommendations

The implementation of the proposed recommendations would require a number of legislative changes and further work on the framework for responding to a SIMP failure. The package of recommendations can be separated into a number of different implementation stages for the COAG Energy Council to pursue when deciding on their response to the recommendations. These stages are:

- For the proposed ROLR amendments, to develop changes to the National Energy Retail Law and submit changes to both the National Electricity Rules and the National Electricity Retail Rules.
- For the recommended changes to allow the ability for participants in external administration to continue to operate in the NEM, to submit the proposed change to the National Electricity Rules.
- For the implementation of the proposed framework for responding to a SIMP failure, the COAG Energy Council would make the necessary legislative amendments and submit rule changes.
- Regarding the development of the stability arrangements, we suggest that the COAG Energy Council commission energy departments, in consultation with

Commonwealth and State and Territory Treasuries, to form a working group to develop the detailed design of stability arrangements for the NEM, involving a form of special external administration.

We also ask that the COAG Energy Council considers our draft advice on the application of the G20 reforms for OTC derivatives to NEM participants.

Stakeholder participation

In preparing this advice we have engaged with a number of stakeholders in the energy and finance sectors. We appreciate the advice and information provided by them, including the time and resources they have committed throughout this project.

Responding to this report

The Commission welcomes submissions on any of the issues raised in this second interim report. Written submissions from stakeholders and interested parties in response to this second interim report must be lodged with the Commission by no later than 25 September 2014.

Submissions should quote project number "EMO0024" and may be lodged online at www.aemc.gov.au or by mail to:

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235.

Contents

1 Introduction

The Australian Energy Market Commission (AEMC or Commission) has identified and assessed the risks to financial system stability in the National Electricity Market (NEM) arising from the interdependencies between market participants. The current arrangements to manage those risks have also been reviewed.

This report sets out the Commission's draft conclusions and draft recommendations to strengthen these arrangements and improve the financial resilience of the NEM.

This introductory chapter summarises and contextualises the request for advice from the COAG Energy Council.[3]

1.1 Request for advice

A request for advice from the Council of Australian Governments (COAG) Energy Council asked the Commission to provide advice on:

- the risks to financial system stability in the NEM from these interdependencies between market participants, as a result of their exposure to a common spot price and hedging arrangements, and the impact of those risks if they materialise;
- existing mechanisms to manage those risks, and whether they are adequate; and
- if inadequate, how to strengthen, enhance or supplement those mechanisms.

The aim of the request is to consider whether the financial relationships and market arrangements underpinning the NEM are sufficiently robust to manage the financial consequences of a market participant (or participants) defaulting on its obligations. If current arrangements are not considered to be adequate, the Commission is to make recommendations to strengthen the financial resilience of the NEM.

As noted in the COAG Energy Council's request for advice, market participants need to manage their own financial and commercial positions. The objective is therefore not to prevent an individual participant failing or leaving the market; rather, the focus is on maintaining the continuity of supply to consumers and the financial stability of the NEM as a whole.

Consistent with the request for advice, the Commission has developed its recommendations in the context of the NEM. Considerations regarding the potential interaction with the gas market, or other markets, are outside the scope of this advice.

1.1.1 Context to the request for advice

The NEM has operated effectively, with businesses entering and exiting the market without disrupting the market. NEM financial markets are generally robust and have been able to evolve to accommodate major events and changes in market circumstances. There have not been any major failures of retailers or generators in the NEM to date.

While recognising the strong track record of the NEM to date, the importance of ensuring the effective functioning of financial flows within the NEM make it timely to:

3 The COAG Energy Council was formerly the Standing Council of Energy and Resources.

- determine the extent to which risks to financial system stability exist in the NEM; and
- consider possible strategies to manage those risks or mitigate any threats to financial system stability.

Events over the past years, such as the global financial crisis (GFC), have caused policy makers and regulators to reconsider their approaches to financial system stability and risk management.

The environment in which the NEM operates has evolved significantly since market start, including in terms of the industry structure and regulatory obligations that apply. The range of challenges that the NEM has faced, and may face over the coming years, whether policy driven, operational, investment related or otherwise, increases the importance of understanding risks to financial system stability in the NEM. It is in this context that the COAG Energy Council requested the Commission to provide its advice.

1.1.2 Key concepts

Generators, retailers and other businesses that participate in the NEM have complex financial relationships with each other. There are different channels through which financial payments flow to and from market participants. These financial interdependencies contribute to the efficient operation of, but also introduce potential risks to financial system stability in, the NEM.

Financial system stability in the NEM refers to the smooth flow of funds between market participants, so that the financial framework that supports the buying and selling of electricity continues to operate as intended. It relates to the stability of the financial framework as a whole, and not the financial position of an individual market participant.

The financial interdependencies between market participants mean that the financial position of one market participant can impact other market participants. One participant experiencing some form of financial distress can affect others. If this becomes extreme, it is referred to as financial contagion. **Financial contagion** has the potential to threaten financial system stability in the NEM through causing the cascading failure of multiple participants. In such circumstances, the financial relationships that support the efficient operation of the NEM could break down. This is referred to as **systemic risk**.

Financial system stability in the NEM is dependent upon the market being able to absorb shocks. Whilst the likelihood of such shocks is uncertain, the failure of a large market participant could have severe flow-on effects in the market. This would include damage to consumer and investor confidence.

The emergence of financial contagion could therefore lead to **financial system instability** in the NEM. In the extreme, financial system instability could compromise the physical supply of electricity and the achievement of the national electricity objective (NEO) and the national energy retail objective (NERO).

1.1.3 Experience of the global financial crisis

The experience of the GFC has demonstrated how quickly confidence can be eroded, and funding and liquidity problems can arise. The GFC demonstrated the potential for financial difficulties to be transmitted quickly from one business to others, resulting in financial system instability that had widespread negative effects on the efficiency of the economy.

The magnitude and speed with which the impacts of the GFC were transmitted from one participant to another (and one sector to another) have triggered financial regulators worldwide to implement broad measures to address system stability issues.

The experience with the GFC has also caused regulators and policy makers for other markets in which participants are financially linked to consider whether financial contagion, and the potential for financial instability, could occur and, if so, what could be done to address it. One such market is the NEM.

1.1.4 Work undertaken to date

In accordance with the COAG Energy Council's request for advice, the Commission has:

- developed an understanding of the risks facing market participants in the NEM and of existing arrangements to manage those risks;
- identified financial relationships between NEM participants and assessed how those relationships could act to transmit financial distress in the market, potentially causing financial contagion and risks to NEM financial system stability;
- evaluated whether existing arrangements to identify, mitigate and respond to risks to financial system stability in the NEM are adequate; and
- assessed a range of measures which could be implemented in order to mitigate risks to financial system stability.

The measures considered include the Group of 20 (G20) recommendations on reforms in the over-the-counter (OTC) derivative market, which Australia is currently in the process of implementing. The Commonwealth Treasury has stated that the Australian Government will consider whether it is appropriate to impose any G20 requirements in relation to electricity derivatives after the completion of the Commission's advice.[4] Chapter 11 contains our proposed advice on these G20 reforms.

In preparing this advice, we have published a number of documents for consultation, and engaged with a variety of stakeholders. Appendix A provides further detail on the stages and progress of this project.

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4 See The Treasury, *Implementation of Australia's G-20 over-the-counter derivative commitments*, proposals paper, December 2012, pp13-14; and Ministerial trade reporting determination, Section 901B(2) Corporations Act 2001, explanatory statement, 2 May 2013, paragraph 15; and The Treasury, *Implementation of Australia's G-20 over-the-counter derivatives commitments*, proposals paper G4-IRD central clearing mandate, February 2014, p1.

The questions raised in the COAG Energy Council's request have been approached in two stages:

- Stage one focussed on risks that could arise if a large electricity retailer experienced financial distress and triggered the operation of the retailer of last resort scheme.
- Stage two examined other potential sources of financial instability and contagion in the NEM, to assess whether there are any material risks to the stability of the NEM arising from financial interdependencies between market participants.

This report brings together our analysis from the two stages and presents an overall assessment, including draft recommendations, in response to the COAG Energy Council's request for advice.

A final report will be published following consideration of submissions to this report.

1.1.5 Developments in financial sector regulation

The request for advice asked that the Commission consider approaches to financial stability regulation in other markets and relevant developments in the financial sector.

Reforms in the financial sector reflect a need to minimise the expectation of taxpayer funds being used to support the financial system. This is particularly the case in a situation where urgent intervention is required to prevent the failure of a major institution, but the terms of that intervention are not known. This point has been made in a report published as part of the inquiry into the Australian Financial System.[5]

We will publish, as part of this advice, a separate paper which explains the reforms being introduced, both in Australia and overseas, to improve the resilience of the financial sector following the GFC.

While we draw on the current regulatory approaches in the financial sector, we are not suggesting that the electricity market must be regulated in the same way. We have considered these developments as a source of information and guidance about what works, and what does not work, in regulating for financial system stability. In developing our draft recommendations, we have been cognisant of the differences between the electricity sector and the financial sector.

1.1.6 Stakeholder participation

The COAG Energy Council's request for advice required the Commission to draw on input from market participants and regulatory bodies in preparing its advice, including through an industry working group and an advisory committee.

The input of stakeholders in preparing this advice has been very valuable. The industry working group has been helpful in explaining the nature of the financial relationships in the NEM and the potential risks arising from those relationships from the perspective of market participants. It has also helped to explain the approaches and measures taken by participants to mitigate those risks.

5 The Financial System Inquiry 2014 (Murray), *Interim Report*, 15 July 2014, p 3-9.

We have also established an advisory committee, so that any recommendations the Commission makes incorporate the consideration of all relevant policy and regulatory requirements. The committee comprises representatives from Commonwealth Treasury, the Australian Energy Regulator (AER), the Australian Securities and Investments Commission (ASIC), the Australian Energy Market Operator (AEMO) and COAG Energy Council officials.

Engagement with a broader range of stakeholders in both the energy and finance sectors has also been important. A number of papers have been published since the commencement of this project for stakeholder comments and stakeholder views have been incorporated into this report.

We appreciate the advice and evidence provided by various stakeholders, including the time and resources they have committed to this project.

1.2 The impacts of financial system instability in the NEM

The isolated failure of one participant in the NEM will not necessarily result in financial system instability in the NEM. The entry and exit of individual participants is a natural feature of any competitive market and it may lead to opportunities for new, more efficient, businesses to enter the market.

However, financial contagion is a different matter. Financial system instability in the NEM, if it occurred, could result in reduced investor confidence, threats to the security of supply and reduced competition. Even if electricity continues to be supplied, consumers risk facing higher prices and less reliable supply if investment is deterred. These risks are likely to be pronounced if investors consider that regulatory arrangements contributed to the financial contagion causing system instability; and that, as a result, financial instability could be repeated in future.

The effects of financial system instability in the NEM could also erode confidence in the market structure and make consumers, governments and their agencies more risk averse. Such a response was evident during, and following, the GFC. These effects could threaten the ongoing efficiency of the market itself and may substantially damage the long term interests of consumers.

We consider that failures of NEM participants would not cause major instability to the overall financial system, given the extent of the exposures of financial sector participants towards the NEM. The effects of multiple electricity participants failing would not, however, be contained within the electricity market and could cause significant disruptions to the wider Australian economy. This could occur by affecting the ability of customers to access reliable and efficiently priced sources of electricity and damaging investor confidence in the Australian economy.

In preparing this advice, we have taken into consideration such potential impacts of financial system instability in the NEM occurring.

1.3 Assessment framework

In preparing our advice, we have been guided by the NEO and the COAG Energy Council's request for advice. The NEO is set out in section 7 of the National Electricity Law (NEL):

> "The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to: (a) price, quality, safety, reliability and security of supply of electricity; and (b) the reliability, safety and security of the national electricity system."

In addition, we have considered the NERO, which is set out in section 13 of the National Energy Retail Law (NERL):

> "The objective of this Law 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."

We are only proposing a measure to improve existing arrangements if we consider that:

- the existing arrangements could be enhanced, strengthened or supplemented; and
- implementation of the measure would be likely to promote efficient investment in, and efficient operation and use of electricity services for the long term interests of consumers of electricity in accordance with the NEO and NERO.

The likely impacts and costs and benefits of any new measure have been assessed against the counterfactual of not implementing any new measures. Taking into consideration stakeholders' views on the risk of financial system instability in the NEM, we have developed a package of draft recommendations consistent with the following criteria:

- contribute to a reduction of the risk of financial contagion in the NEM;
- consistent with efficient allocation of risk in the market;
- effective, and unlikely to lead to perverse behaviour or moral hazard;
- transparent and accountable; and
- proportionate to the impact on the market of the risk being addressed.

In developing its draft recommendations, the Commission has taken into account the impact of these proposals on the allocation of risk between different parties, including retailers, generators, network service providers, customers, creditors, government, and ultimately, taxpayers. Risk should be borne by the party best able to manage it.

In assessing the likely effectiveness of any measure, we have had regard to the potential for participants to undermine its effectiveness through altering their behaviour. Of relevance has also been how any new measure would relate to existing obligations on market participants, such as those under the Corporations Act and accounting and auditing standards.

Avoiding moral hazard is consistent with the COAG Energy Council's request for advice, which identifies the need for market participants to manage their own financial and commercial positions.[6] We have developed our draft recommendations with an aim to maintain commercial incentives on businesses to efficiently manage the risks of operating in the NEM, as this is a key mechanism to protect against financial contagion.

Our recommendations are clear in terms of responsibility and accountability. This is critical in circumstances where participants are experiencing financial distress.

Recommendations are proportionate if they do not impose costs that are out of line with the likely benefits of the changes. Options that are simple and easy to implement have been preferred over more complex solutions, unless there are clear benefits in adopting a more complex solution.

1.4 Responding to this report

The Commission welcomes submissions on any of the issues raised in this second interim report. Written submissions from stakeholders and interested parties in response to this second interim report must be lodged with the Commission by no later than 25 September 2014.

Submissions should quote project number "EMO0024" and may be lodged online at www.aemc.gov.au or by mail to:

Australian Energy Market Commission

PO Box A2449

Sydney South NSW 1235.

1.5 Structure of the report

The report responds to the request for advice as follows.

Identification of risks to financial system stability in the NEM:

- Chapter 2 explains the financial interdependencies in the NEM and the risks to financial system stability arising from those interdependencies.
- Chapter 3 discusses the risk to the financial system stability arising from the application of the retailer of last resort scheme.

Assessment of existing mechanisms to manage risks to financial system stability in the NEM:

- Chapter 4 provides an assessment of current arrangements that seek to identify and mitigate risks to financial system stability prior to any participant failure.
- Chapter 5 sets out the Commission's assessment of how current market arrangements respond to and manage a participant failure.

6 Moral hazard can arise where an individual or business does not bear the full costs of the risks they take. As a result, they may have an incentive or tendency to take on more than an optimal level of risk, knowing that they will not bear the full cost of any detrimental consequences.

Recommendations on how to strengthen, enhance or supplement existing mechanisms:

- Chapter 6 discusses draft recommendations for improving how market arrangements respond to a large participant failure in the NEM.
- Chapter 7 discusses possible alternative stability arrangements to operate in place of the retailer of last resort scheme in the case of large retailer failure.
- Chapter 8 contains our advice on proposed amendments to the retailer of last resort scheme.
- Chapter 9 proposes amendments to the NER suspension provisions.
- Chapter 10 sets outs our draft recommendations on measures relating to risk management practices in the NEM.
- Chapter 11 provides our proposed advice on the G20 recommendations for OTC reform.

The appendices to this report have been published in a separate document:

- Appendix A provides an overview of the approach and reports in this project.
- Appendix B contains submissions by stakeholders to the first interim report and the Commission's response to comments made.
- Appendix C contains submissions by stakeholders to the stage two options paper, and the Commission's response to comments made.
- Appendix D includes case studies of business failures in the NEM from its commencement to the present day.
- Appendix E sets out detailed modelling assumptions for estimation of the financial implications of a large retailer failure.
- Appendix F describes the corporate structures of the three largest vertically integrated market participants.
- Appendix G provides an overview of default and suspension and similar arrangements that could restrict or cease the market operation of a participant.
- Appendix H contains draft Terms of Reference for further work on alternative stability arrangements.

We have also published two consultancy reports in conjunction with this report:

  - a report by Frontier Economics on policy responses to mitigate the risk of financial contagion in the NEM; and
  - a report by Deloitte on accounting and auditing requirements of market participants in the NEM.

2 Risks to financial system stability in the NEM through financial interdependencies

Market participants in the NEM are constantly engaged in the process of accruing and discharging a range of financial obligations between each other, AEMO and other parties. Some of the key financial relationships in the NEM arise via the spot market, exchange traded derivatives and over-the-counter (OTC) contracts. As a result, there is a risk that if one participant encounters significant financial difficulties, those difficulties could be transmitted to other participants.

Of these relationships, contract counterparty default creates the most likely potential risk to financial system stability in the NEM.

A failure of an OTC contract counterparty to meet its obligations could result in other participants being exposed to spot prices for a substantial part of their retail load or generation capacity. In addition, they would experience losses associated with a counterparty failing to meet payments under its contract obligations.

While the possibility is uncertain, there is a risk of financial contagion occurring through OTC contracts. Whether this would occur and threaten financial system stability in the NEM would depend on a broad spectrum of variables at the time. The risk of financial contagion would more likely exist where a retailer(s) has a high concentration of hedge contracts with a large generator and that generator defaults on its OTC contracts. A generator experiencing counterparty failure would generally not suffer as extreme a financial loss as a retailer, primarily because of the highly asymmetric nature of spot prices.

For the spot market and exchange traded derivatives, arrangements are in place to manage, respectively, the risk of settlement shortfall and counterparty default. Such arrangements:

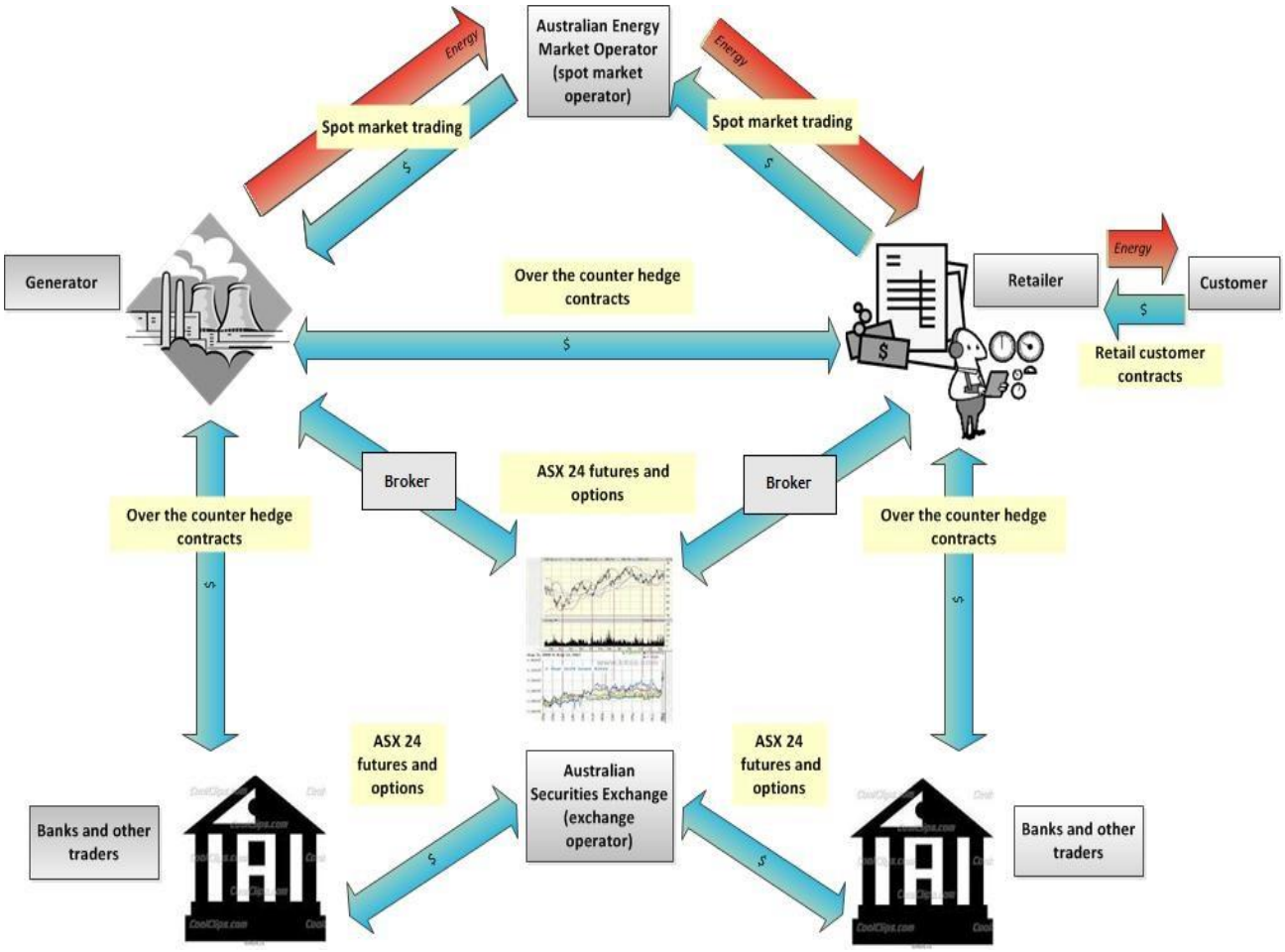
- act to diversify the risk of participant failure across a large number of businesses and the impacts are, therefore, not concentrated on a single participant. For example, under the AEMO settlement process, all generators are exposed to any shortfall in settlement payments.
- include financial requirements on participants to build up financial reserves (eg, credit support or margining requirements). Such reserves act as a buffer to protect against, and absorb, impacts of a participant failing.

This chapter considers the risks to financial system stability in the NEM arising from interdependencies between market participants. It discusses the main financial relationships in the NEM and explains which of those interdependencies could act to transmit financial contagion, thereby threatening financial stability in the NEM.

2.1 Financial Interdependencies in the NEM

Figure 2.1 illustrates that interdependencies between market participants exist through financial relationships in both the spot market (the top half of the figure) and in the financial contract market (the bottom half of the figure).

Figure 2.1 Financial relationships between market participants in the NEM



The physical delivery of electricity, shown in red in figure 2.1, occurs through the wholesale and retail electricity markets. Most generators participating in the NEM sell all their electricity through the spot market, which is operated by AEMO. Retailers buy almost all of their electricity through this market, which is supplied to their customers, as shown in the diagram.

Apart from the physical delivery of electricity described above, all of the other relationships in figure 2.1 involve financial transactions (shown in blue), and not the supply of electricity.

The transactions shown as 'spot market trading' in figure 2.1 involve generators receiving payment for all electricity they sell on the spot market, and retailers paying for the electricity their customers use. This settlement process is managed by AEMO.

Price volatility in the spot market creates significant risks for both retailers and generators. Generators and retailers seek to manage these spot price risks through a range of strategies. Electricity cannot be stored and there is a need for real time matching of supply and demand. One option is to enter into financial relationships with each other and with other market participants, known as 'derivative' or 'hedge' contracts, which are illustrated in figure 2.1. The two main types of hedge contracts, shown in the figure, are OTC hedge contracts and futures/options traded on the Australian Securities Exchange 24 (ASX 24).

In summary, there are three main channels through which market participants are financially interconnected, being:

1. in the spot market, via the settlements process that is managed by AEMO. In particular, generators are dependent on retailers making payments for the purchase of electricity through the spot market;
2. through the ASX 24 which is a centralised exchange that offers standardised electricity futures and options products;[7] and
3. through bilateral OTC hedge contracts between participants and sometimes intermediaries. Participants use OTCs to manage the risk of variations in the wholesale regional spot prices.

These financial relationships can create a high level of financial interdependency between market participants.

Financial interdependencies could also be manifested via indirect channels. For example, the failure of a large market participant could shrink liquidity in the contract markets and thus intensify the financial impact felt by other participants.

It could cause funding providers to increase financing costs or retreat from the market. Further, if a participant is forced to sell assets in times of financial stress, that could affect the value of similar assets held by other participants as well.

The GFC highlighted that the failure of one institution to honour its financial commitments can create difficulties for other institutions. As the fear increases that similar commitments made by other institutions may be dishonoured, funding and asset markets can freeze, resulting in severe and widespread transmission of financial contagion across the system.

2.2 Risks faced by market participants

Market participants are exposed to a variety of risks when buying and selling electricity in the NEM, including settlement risk, market risk, credit risk and cash-flow risk.

Managing these risks is an integral part of a participant's day-to-day operations and involves continuous trade-off decisions between degrees of exposure to various sources of risk. This section describes these risks associated with operating in the NEM.

2.2.1 Settlement risk

The NEM is a gross pool, in that it is compulsory for most generators to sell their entire electricity output into the spot market.

Retailers pay AEMO for the electricity their customers consume, and AEMO subsequently pays generators for the electricity they supply into the market. This settlement process occurs weekly about 33 days in arrears, which means payments for electricity bought are made four weeks in arrears. This creates a risk for generators that one or more retailers may be unable to pay their bill when the payment is due (settlement risk).

7 These products are explained in more detail in stage two options paper. See AEMC, *Stage two options paper*, 8 November 2013, section 3.1.2.

The National Electricity Rules (NER) contain a regime that is designed to protect generators in the NEM against a settlement shortfall arising from non-payment by retailers. Under the current rules, AEMO determines a maximum credit limit (MCL)for each participant based on 2 per cent probability that a participant's outstandings to AEMO will exceed its MCL by the time the participant is suspended from the market, restricting residual settlement risk to very low probability events.[8]A participant must provide credit support to an amount that is at least equal to its MCL.[9]

Participants also have a trading limit, which is currently set in relation to their MCL.[10] The margin between the credit and trading limits is designed to cover AEMO's potential liabilities during a seven day reaction period, representing the expected amount of time required to suspend a participant. Exceeding its trading limit would also require a participant to provide additional cash or credit support to AEMO.

Market participants can reduce the required prudential credit support by the use of reallocation arrangements. This is a financial arrangement between two market participants and AEMO. The objective is to provide energy settlement and credit support relief to a market participant who has an existing off-market contract in place, such as an energy delivery contract or a hedge contract.[11] A reallocation arrangement allows the financial commitments existing under that off-market contract to be netted off against spot market settlement obligations without adversely affecting the prudential quality in the NEM.[12]

2.2.2 Market risk

Retailers normally charge customers a price that shields them from direct exposure to spot price volatility.[13]

Retailers must manage the risk of an input with a highly volatile price, while supplying an output with a more-or-less fixed price.

Spot price volatility also creates risks for generators, due to the risk of periods of low prices. Generation investment involves large fixed costs, and significant ongoing operating and maintenance costs. But generators do not have any certainty as to the spot market revenue they will receive from operating. If spot prices are below a generator's costs on a sustained basis, it could encounter financial difficulties.

Generators and retailers seek to manage these risks by entering into a range of financial relationships with each other and with other financial market participants. Given the opposing payoffs to retailers and generators from high and low spot prices, there is a

8 NER, clause 3.3.4A. The 2 per cent probability is referred to as the NEM prudential standard.

9 NER, clause 3.3.5.

10 NER, clause 3.3.10.

11 NER, section 3.15.11

12 A similar mechanism has been proposed for the future markets through a futures offset arrangement. This was discussed in AEMC, *Review into the role of hedging contracts in the existing NEM prudential framework*, final report, 27 July 2010.

13 Spot price volatility can create significant risks for retailers. For example, just one hour at the current market price cap of $13,500/MWh could result in a large retailer incurring spot market liabilities of tens of millions of dollars to cover the electricity used by its customers.

mutually beneficial opportunity for both types of participants to enter into financial relationships that allow them to better manage their risks.

Derivatives

The most commonly used instruments to hedge against market risks are 'derivative', or 'hedge', contracts. These contracts are called derivative contracts because their value is linked to the underlying commodity price, in this case, the wholesale electricity price. Such contracts create an offsetting payment or revenue stream that balances out the change in the spot price (therefore, they are sometimes called 'contracts-for-difference'), in effect hedging the generator's or retailer's spot price exposure.

Derivative contracts can be negotiated bilaterally (OTC) or traded on an exchange.

Electricity derivatives can be used to manage both price and volume risks - for example, through the development of specialised contracts which are specifically tailored to a retailer's volume patterns (eg, 'load-following' hedges). This is different to other common types of derivatives, such as interest rates and foreign exchange products, which are mostly used to manage price risk only. This distinct characteristic of electricity derivatives results in the development of specialised contracts which are specifically tailored to a retailer's volume patterns.

During 2012-13, the total volume of OTC contracts reported was 292 million MWhs. This is equivalent to 1.6 times the total NEM demand of 184 million MWhs during that year. For the same period, volume on the ASX 24 energy futures exchange traded 1.9 times underlying NEM system demand. Therefore in total, derivative contracts relating to the NEM were approximately 3.5 times total demand during the financial year 2012-13. We note that both the liquidity of the derivatives contracts available and the volume of contracts traded vary significantly between NEM regions.[14]

Combined generation/retail business

An alternative approach for participants to hedge spot price risk is to operate both generation and retailing businesses. Such participants are referred to as 'gentailers'. To the extent its generation and retailing exposures to the wholesale market match, a gentailer has a 'natural hedge' against movements in the spot price of electricity. The vertical integration of generators and retailers has been a significant trend in the NEM over recent years. A significant share of both wholesale and retail electricity markets is now supplied by gentailers. Origin, EnergyAustralia and AGL collectively account for approximately 80 per cent of customers and have roughly up to 45 per cent of generation capacity in the NEM.[15]

2.2.3 Credit risk

Credit risk arises from the possibility of a participant's contracted counterparty defaulting on its obligations under the contract. By entering into OTC hedge contracts, market participants are essentially replacing their exposure to market risk by an

14 AFMA, *2013 Australian Financial Markets Report*.

15 Based on 2013 calendar year numbers. This includes output by Macquarie Generation which is in the process of being acquired by AGL. AER, *State of the Energy Market 2013*.

exposure to the risk of their counterparties defaulting on their obligations under the contracts. Credit risk can sometimes be referred to as counterparty risk.

Participants have indicated they continuously assess the creditworthiness of their counterparties. In doing so, most participants appear to rely on a combination of their own desk top analysis into a counterparty's financial position and ratings from the major credit rating agencies, such as Standard & Poor's or Moody's, where they are available.

Participants generally use maximum counterparty credit limits to determine which level of exposure is appropriate for each counterparty, depending on a counterparty's creditworthiness. It also appears to be common among participants to halt or reduce trading with a particular counterparty when that counterparty's creditworthiness reduces.

Further, most participants appear to have policies in place to actively diversify the number of counterparties they have, in order to reduce risk from exposure to a single counterparty or small number of counterparties.

2.2.4 Cash flow risk

Cash flow risk is the risk that a company's available cash will not be sufficient to meet its financial obligations. An example would be meeting margin calls for ASX 24 traded contracts. Cash flow risk may arise or may be increased as the result of a misalignment in time or in magnitude between payments receivable and payments due.

Cash flow risk is differentiated from market liquidity risk. Market liquidity risk arises when there are an insufficient number of parties actively participating in a given market to support willing buyers and sellers transacting their products at acceptable prices or, under certain circumstances, at all.

A lack of market liquidity can magnify cash flow risk, as it could limit a participant's ability to sell assets to support its cash flow position.

2.3 How contagion could occur through financial interdependencies

2.3.1 Financial contagion

Financial contagion would occur when a number of market participants are not able to fund - in the required time - their financial liabilities and obligations resulting from the failure of another market participant. This would threaten financial system stability in the NEM. The risk of contagion occurring depends on:

- the nature and extent of the financial exposures of other participants to the failing participant in question. For other participants it will include whether they have hedge cover for their retail or generation loads;
- the magnitude and timing of any additional liabilities incurred as a result of the failure of the failing participant (eg, payments for the consumption of customers transferred under retailer of last resort arrangements);
- how the market arrangements respond to a failure of a market participant; and

- the capacity of market participants to absorb additional liabilities, either through their own capital reserves or through accessing new sources of finance.

2.3.2 Exchange traded derivatives and spot market

We do not consider the contracts traded via the ASX 24 exchange to be a significant cause of financial contagion.

There is no direct relationship between generators and retailers when they buy and sell futures and options on the ASX 24, so there is no direct channel for financial distress of one of these parties to be transmitted to the other. With centralised trade clearing, exchanges effectively remove counterparty credit risk by becoming the seller to every buyer, and buyer to every seller, thereby guaranteeing transactions. For example, a generator that sells a futures product is not exposed to the credit risk that it will not receive payments if a retailer defaults. Instead, that risk is transferred to ASX Clear (Futures), the clearing house operated by the ASX which acts as the central counterparty for all futures and options products traded on the ASX 24. The creditworthiness of the clearing house itself then becomes an important issue.

The ASX manages this credit risk by assessing the credit risk of each individual participant and assigning a credit obligation commensurate to the perceived level of counterparty risk. Accordingly, the ASX requires anyone that trades on the ASX 24 to provide a specified amount of money as an 'initial margin', to act as credit support in the event of a failure to pay. The ASX also calculates 'variation margins' based on daily price movements. A party that purchases futures or options will be required to pay these variation margins each day, or be entitled to receive a variation margin payment, depending on daily price changes. The ASX requires that all member firms meet their fiduciary responsibilities and capitalisation requirements.

Similarly, we do not consider that the settlements process gives rise to a significant risk of financial contagion. As explained in section 2.2.1, the NER contains obligations on market participants to protect against any shortfall in the wholesale market payments.

The mechanisms administered by AEMO do not mean that the settlement process could never act as a potential channel to transmit contagion, although the risks of contagion are very limited. The most extreme circumstances, falling outside the 2 per cent NEM prudential standard, could result in a shortfall in the settlement process that would see AEMO pass onto all generators a pro rata short payment. The payment shortfall could lead to a shortage of capital for a generator, and the generator could be unable to meet all its immediate financial obligations, leading to further defaults.

In summary, there are features of ASX 24 derivatives exchange procedures and the AEMO settlement process that help to prevent financial contagion. These are:

- AEMO settlement acts to diversify the financial implications of participant failure across a large number of businesses and therefore the impacts are not concentrated on a single participant.
- Both AEMO and ASX arrangements include financial requirements on participants in order to build up financial reserves (eg, credit support or margining requirements). Such reserves act as a buffer to protect against, and absorb, impacts of a participant failing.

2.3.3 Contagion through the OTC contract market

A key channel of financial interconnectedness between market participants is the use of OTC derivative contracts. These contracts are central to the management of market risk. At the same time, they may also act to transmit financial distress from one participant to another, if a counterparty defaults on the payments due under a contract. As explained in section 2.2.3, this is referred to as credit or counterparty risk.

The impact of a counterparty defaulting includes both direct losses and the secondary effects:

- Direct losses relate to the loss of payments under the contract and also the cost of replacing those contracts. The magnitude of loss of payment would depend on the settlement periods for OTC contracts, which tend to be around 4-5 weeks in arrears, and also on the probability of the participant receiving the termination payout from the administrators of the defaulting participant. The costs of replacing failed contracts would be incurred over the duration of those contracts. Hence, counterparty default might not cause immediate contagion as the costs of replacing contracts could be spread out over the time of the initial contract.[16]
- Secondary effects relate to how default by an individual market participant could affect both market conditions (such as the spot price or the availability of generation) and also the creditworthiness of other participants. During the GFC, the impact of individual participants failing was exacerbated by uncertainty about which other businesses were in imminent danger of failing, causing a 'freeze' in liquidity and financing.

If the affected market participant does not have adequate reserves, or ability to attract short term finance, these additional short term cost pressures could place substantial financial pressures on the participant. If the participant is able to ride out the costs pressures, it should be able to remain viable as long as it can recover those additional costs from its customer base.

It does not appear to be standard practice among participants in the NEM to exchange collateral for every OTC transaction they undertake as a safeguard in case a counterparty defaults on its obligations.[17]Reasons given to us by participants for not requiring collateral include:

- a number of generators are owned by governments;
- OTC electricity contracts of a long duration may not be suitable for margining and could lead to a very high cost for collateralisation;
- OTC electricity contracts are underpinned by either a retail load or generation asset; and

16 We note however, that, under accountancy standard AASB 139, the non-defaulting counterparty may be required to immediately write off the total value of the loss. This may then cause the business to breach its debt covenants with banks, which in turn could cause the company's default, leading to contagion.

17 Some participants have indicated they may require provision of credit support (for example, a parent group guarantee or bank guarantees) or collateral before entering into an agreement with a counterparty they consider to be of lower creditworthiness.

- requiring collateralisation may negatively affect the liquidity in the market, since it would place additional demands on scarce capital.

Instead, participants advised that credit risk is managed through restricting maturity limits and transaction sizes with entities depending on their creditworthiness, in order to manage exposure. The risk of financial contagion occurring through OTC contracts depends on participant risk management practices and the robustness of participants' reserves to absorb such losses. These issues are discussed further in chapter 4.

Box 2.1 presents a case study of how financial contagion could be transmitted through OTC contracts.

Box 2.1: Example of contagion through OTC contracts: Constellation Energy in the US

Constellation Energy Group (Constellation) was one of the largest diversified vertically integrated energy companies in the United States prior to 2008. Constellation had over 35 power stations across 11 states with customers in regions around Maryland, Pennsylvania, New York and West Virginia within its portfolio. It had generation capacity of over 9100 MW, of which 4100 MW was nuclear capacity and the remaining 5000 MW was coal, gas & hydro. The two most prominent shareholders in Constellation were French electricity utility EDF (9.5 per cent) and Lehman Brothers (5.3 per cent).

The nature of the inter-linkage between Lehman Brothers, EDF and Constellation facilitated the spread of systemic risk from prevailing macro-economic events in financial markets into the energy market across North America. The financial interdependencies between Lehman Brothers and Constellation due to the contacting behaviour between these two businesses resulted in the near collapse of Constellation following the bankruptcy of Lehman in 2008. Constellation had to be saved initially through funding from Berkshire Hathaway and then through a corporate restructuring with a capital injection from its parent company, EDF.

The circumstances which contributed to the near collapse of Constellation and gave rise to systemic risk arose from the combination of the macro-economic financial events during the GFC in 2008 and the following three factors:

- the high prevalence of collateralisation of OTC contracts and the use of exchange traded futures in both electricity and gas markets across North America, which had the effect of translating credit risk into funding and liquidity risk;
- a highly leveraged investment bank, with Lehman Brother's actively trading in energy market derivatives with both energy companies and end use customers;
- a highly leveraged physical energy company, with excessively concentrated exposure to a single highly leveraged investment bank.

Prior to 2008, Lehman Brothers was aggressively expanding its trading activities using a wide range of structured derivatives across multiple product markets. In addition, unlike traditional banks, Lehman Brothers was actively holding

significant equity in major energy companies across North America of which its largest shareholding was in Constellation. It also held debt with these companies. This allowed Lehman Brothers to have board representation and unusually high levels of influence on management decisions.

It is understood that Lehman Brothers was actively using a 'credit wash' strategy with energy market participants and specifically with Constellation. This was a strategy in which Lehman Brothers would enter into a fully back-to-back offsetting transaction between energy market participants with poor credit ratings and Constellation. This allowed Constellation to mitigate its credit risk exposure to poor credit counterparties but increased its concentration of credit risk to Lehman Brothers. The failure of Lehman Brothers resulted in Constellation facing a US$4 billion funding shortfall to support its ongoing operations.

The withdrawal of Lehman Brothers from the energy derivatives trading also caused a sudden liquidity crisis at a time when the energy market was experiencing severe market volatility. Additionally securing OTC contracts priced against exchange traded futures was cost prohibitive as credit lines had been severely curtailed. This increased the costs for Constellation. The tendency for many energy companies in the United States to be either highly leveraged or asset intensive meant that variation in credit premiums and funding and liquidity due to macro-economic events had disproportionately large impact across the energy industry.

2.3.4 Stakeholder views

In response to the stage two options paper, market participants questioned whether financial contagion could occur through OTC contracts.

AGL considered that the risk of contagion in the NEM due to a counterparty default in OTC contracts is very low because the NEM is a very resilient and robust market. AGL noted that throughout its 15 year history, the NEM has withstood significant financial pressures as a result of droughts, substantial outages, record heatwaves and financial collapses. AGL stated that there is no evidence to suggest that a counterparty default in the OTC electricity market is likely to result in financial pressures that are more significant than those that the NEM has survived.[18]

Likewise, GDF Suez noted that despite a number of challenges, there has been no instance in which contagion has led to counterparties being adversely impacted to any serious extent. GDF Suez advised that this track record should give market participants and regulators confidence in the robust nature of the NEM.[19]

Origin noted that offsetting the cost of spot market or hedge contract purchases is the ability of retailers to pass wholesale energy costs through to consumers. Origin considered that the replacement costs for OTC contracts following a counterparty default are likely to be managed by participants without the risk of contagion. The wholesale cost component of regulated tariffs are determined annually, so Origin

18 Submission by AGL to the stage two options paper, 18 December 2013, p1.

19 Submission by GDF Suez to the stage two options paper, 19 November 2013, p4.

considers that higher wholesale purchase costs could be passed on to mass market customers on both regulated and market contracts in a reasonable timeframe.[20]

Market participants also referenced analysis provided by Seed Advisory as part of the Energy Supply Association of Australia (ESAA) submission to the stage two options paper.[21] Seed Advisory's analysis is discussed further in the next section.

2.4 Seed Advisory estimates of counterparty default

The ESAA submission to the stage two options paper included analysis from Seed Advisory on the extent of systemic risk in the electricity OTC derivative market.[22] The purpose of this analysis was to consider whether the proposed G20 reforms to require trade reporting for OTC contracts and higher margin requirements for non-centrally cleared OTC derivatives were appropriate for the NEM.

2.4.1 Seed Advisory modelling approach

Using actual data from seven large market participants, Seed Advisory modelled the potential costs faced by a typical vertically integrated retailer and a stand-alone generator in the event of two separate scenarios:

- the failure of the derivative counterparty that a participant had the largest position with (by volume in MW); and
- the failure of the derivative counterparty that a participant had an average size position with (by volume in MW).

Seed Advisory's analysis calculated both the immediate settlement loss cost of OTC default, and the cost of managing wholesale purchases over the remainder of the term of the defaulted contracts (either through the replacement of the defaulted contracts or through increased exposure to wholesale spot prices). They found that the majority of costs were attributable to the latter category - immediate settlement issues were much smaller than the future costs attributable to replacing the defaulted contracts. Those costs only crystallised over the remaining contract period following the initial default.

2.4.2 Seed Advisory modelling results and conclusions

The largest total loss modelled by Seed Advisory for a vertically integrated retailer occurred where the retailer lost contracts with its largest counterparty and then locked in replacement contracts at unfavourable market prices for the total term of the contracts now in default. Under these conditions, the total loss was estimated to be $630 million, of which $140 million represented the settlement losses, which require access to cash over the immediate and very short term (a 5 week period). Seed Advisory concluded that this estimated immediate loss should pose no funding issues and, hence,

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20 Submission by Origin Energy to the stage two options paper, 19 November 2013, p7.

21 Seed Advisory, *NEM Financial Resilience - Report for the Private Generators Group, the National Generators Forum and the Energy Supply Association of Australia*, 14 August 2013.

22 Seed Advisory, *NEM Financial Resilience - Report for the Private Generators Group, the National Generators Forum and the Energy Supply Association of Australia*, 14 August 2013.

a low risk of contagion based on the reported cash flows of the large vertically integrated retailers.[23]

The comparable total loss figure for a stand-alone generator was $115 million, of which $10 million represented the settlement losses to be incurred over the initial 5 week period.

Extrapolating the estimates to all participants in the NEM, Seed Advisory estimated that the short term funding requirement for the market could range from $200 million to $560 million, spread over a number of counterparties. Looking at the 2011-12 turnover in the NEM of around $6 billion, at its maximum this represents just under 10 per cent of total annual turnover. In Seed Advisory's view, this is unlikely to represent an immediate risk to system stability.

Seed Advisory considered that the greater loss to participants comes from the cost of having to manage future wholesale purchase costs either by acquiring potentially more expensive contracts or purchasing from the spot market. This loss was between $200 million and $490 million over two years. Seed Advisory commented that such a loss over a period of two plus years is unlikely to result in immediate failures, but noted that a loss of this size could affect shareholder valuations across the sector generally, resulting in a reduction in loans to the sector and, potentially, pressure on loan covenants and the orderly disposal of assets.

The comparable loss figures for a stand-alone generator were between $95 million and $105 million.

Based on the data provided, Seed Advisory found that the exposures for average counterparties were materially smaller than for a large counterparty. The average settlement loss, based on data provided by participants, was $15 million for a vertically integrated market participant, and $2 million for a stand-alone generator.

Seed Advisory concluded that the failure of the largest counterparty of a vertically integrated retailer would be unlikely to cause financial contagion and threaten financial system stability in the NEM. This is based on the currently reported profits and turnovers of the vertically integrated retailers.[24]

Seed Advisory's modelling results are summarised in table 2.1.[25]

23 Ibid, p6.

24 NEM turnover or participants annual cash flows may not be the correct parameters to use to assess a participant's ability to absorb financial losses. The capital reserves and available cash, liquid assets, and ability to access finance are likely be more crucial determinants in whether the business can immediately survive a counterparty default. Therefore, it could be health of the participant's balance sheet, and not so much the size of the balance sheet which would determine the risk of contagion.

25 Seed Advisory, *NEM Financial Resilience - Report for the Private Generators Group, the National Generators Forum and the Energy Supply Association of Australia*, 14 August 2013, p4.

Table 2.1 Seed Advisory modelling of OTC counterparty default costs ($ million)

Estimate impact of OTC counterparty default for vertically integrated retailer		
cost	Largest counterparty default $million	Average counterparty default $million
Settlement amount not received	140	15
a) Exposure to spot price; or	230	10
b) Replacement of contracts	490	70
Estimated total loss	370 to 630	25 to 85
Estimate impact of OTC counterparty default for stand-alone generator		
Settlement amount not received	10	2
a) Exposure to spot price; or	15	3
b) Replacement of contract	105	25
Estimated total loss	25 to 115	5 to 27

2.5 Commission's considerations and conclusions

Seed Advisory's modelling was focussed on the G20 reforms. The Commission's considerations regarding the proposed G20 reforms are contained in chapter 11.

Seed Advisory's modelling is also useful for understanding the materiality of the risks to system stability in the NEM and this section discusses our considerations in this regard. From Seed Advisory's work:

- The magnitude of liabilities experienced by participants and, therefore, the risk of contagion occurring would differ, depending on whether it is a generator or a retailer business that experiences OTC counterparty default. Generally speaking, a generator experiencing counterparty failure would not face as severe financial consequences as a retailer would, largely due to the highly asymmetric distribution of spot prices. Retailers could be exposed to purchasing electricity for their customers at spot prices as high as the market price cap of $13,500/MWh. Generators would only forego contract difference payments down to the market price floor of -$1,000/MWh.
- The majority of costs associated with OTC contract default related to the costs associated with replacing the contracts, and not to the immediate settlement loss associated with the contracts. Counterparty default might not cause immediate contagion as the costs of replacing contracts could be spread out over the time of the initial contract. In addition, margining requirements for OTC contracts would not contain this replacement cost.

Given the indication of the potential magnitude of the financial impacts of default in OTC contracts modelled, Seed Advisory suggested that, in most cases, market participants would be able to manage a default of an OTC counterparty.

Whether or not a participant could withstand the failure of its largest counterparty would depend on a wide range of variables, and the conclusions of Seed Advisory's analysis are consistent with this. These variables include:

- whether the participant holds sufficient capital reserves to absorb the impact of financial shocks;
- the ability of the participant to source additional funding to manage any short term cash flow impacts;
- the participant's internal finance thresholds (eg, debt covenants, margin ratios) or external reserves obligations. Settlement losses from OTC counterparty default could trigger financial covenants and obligations, thereby causing additional financial distress for the participant;
- whether the default coincides with other unfavourable events occurring. For example, high spot prices together with generation plant outages and a squeeze on the general availability of credit, would magnify the impacts of a counterparty default. Such events tend to be unexpected and not reflective of normal market conditions;
- the degree of concentration of hedge contracts between participants. Where there are fewer participants, the concentrations of hedge contracts held by each participant would likely be higher and the impacts of the counterparty default could be more severe; and
- the hedging strategies adopted by market participants, such as the percentage of retail load or generation capacity which is hedged.

While the possibility is uncertain, there is a risk of financial contagion occurring through OTC contracts. Whether or not this would occur would depend on a broad spectrum of variables and the unique circumstances of individual market participants at the time.

3 Risks to financial system stability in the NEM - retailer of last resort scheme

The retailer of last resort (ROLR) scheme applies in the case of a suspension from the NEM of a retailer. This scheme is intended to enable continued supply to, and orderly transfer of, the failed retailer's customers while preserving the integrity of the settlement of the spot market.

A threat to financial system stability in the NEM would arise if a large retailer experiences financial distress and triggers the application of the ROLR scheme in its current form. This is because of the additional financial obligations faced by a ROLR if it acquires a large number of customers, to be met in a very short timeframe. If these obligations cannot be met by the ROLR(s), further failures may occur.

The key challenges for a ROLR are:

- **Cash flow risk,** that is, that the ROLR would not be able to meet payment obligations due to a mismatch between the timing of money received and payments due. Retailers commonly invoice residential customers every quarter in arrears, but would be incurring the costs of purchasing electricity in the spot market for the transferred customers during those three months; and
- **Additional credit support** in relation to the acquired customers, which must be provided to AEMO and may be required by distribution network service providers (DNSPs).

In a scenario where the failed retailer accounts for 20 per cent of NEM market share, and market conditions are similar to those experienced by the NEM during the 2007 drought, we estimate that the ROLR would need to organise an additional credit support of $672 million to AEMO; up to $372 million of additional credit support to DNSPs; and fund an extra $42 million wholesale market payments each week. The magnitude of such additional financial obligations could trigger further failures.

In addition, there are likely to be **information and systems challenges** involved in transferring large numbers of customers. If customer information is not transferred efficiently from the failed retailer to the ROLR, it would inhibit the ROLR's ability to hedge the new load since it would have incomplete information about load characteristics. It would also make it difficult to establish effective customer communication and billing arrangements.

This chapter sets out the Commission's analysis and conclusions on the risks to financial system stability in the NEM arising from the application of the current ROLR scheme. It explains how this scheme could act to transmit financial contagion, thereby threatening financial system stability in the NEM. It includes estimates of the financial implications on other market participants following the suspension from the market of a participant with a large retail load.

Our analysis and draft recommendations have been developed using the ROLR scheme included in the National Energy Customer Framework (NECF). We have assumed that this ROLR scheme applies across the NEM. The NECF has not been adopted in all jurisdictions. New South Wales, South Australia, Tasmania, ACT have all already adopted the NECF and Queensland is scheduled to adopt the NECF on 1 July 2015.

3.1 Operation of the ROLR scheme

The ROLR scheme applies in the case of a suspension from the NEM of a retailer. This scheme is intended to enable continued supply to, and orderly transfer of, the failed retailer's customers while preserving the integrity of the settlement of the spot market. Under this scheme, the customers (or the supply points for which a retailer is financially responsible) of a retailer who is suspended from the NEM would be transferred to one or more other retailers, referred to in the NERL as the 'designated ROLRs'.

Box 3.1: The retailer of last resort scheme under the NERL

The NERL requires a "default ROLR" to be appointed by the AER for all electricity connection points. The AER may also appoint "additional ROLRs" in an area. When a ROLR event is triggered, the default ROLR will be appointed as the "designated ROLR" unless the AER provides AEMO with written notice before the ROLR event occurs, appointing another retailer instead. In this report, we refer simply to the ROLR.

Retailers can submit an expression of interest to the AER to become an additional ROLR. The AER has established two categories of additional ROLRs - a "firm offer" category where retailers pre-commit to the terms and conditions under which they would be appointed as a ROLR, and a "non-firm" category where retailers register their interest in being a ROLR but they are not committed to acting in that role.

The designated ROLR is responsible for taking on new customers and facilitating customer transfers from the failed retailer. The AER can appoint more than one retailer as a designated ROLR in any area. If it does so, the customers of the failed retailer will be allocated between the designated ROLRs.

For small customers, a "ROLR deemed small customer arrangement" is taken to apply between the designated ROLR and the small customer. The terms and conditions of this contract are those of the designated ROLR's standard retail contract. The prices are the ROLR's standing offer prices, with any variation in accordance with the ROLR cost recovery scheme.

For large customers, the terms and conditions of the "ROLR deemed large contract arrangement" are the terms and conditions published by the designated ROLR on its website, which must be fair and reasonable.

A designated ROLR may apply to the AER to recover certain costs related to the ROLR scheme. Default ROLRs may apply to recover their costs to prepare for a potential ROLR event and designated ROLRs may apply to recover their costs associated with an actual ROLR event.

3.2 Key factors leading to a cascading retailer failure

As explained in the first interim report, application of the ROLR scheme in its current form could cause financial contagion if the retailer had a substantial retail load. This is because of the immediate and substantial financial obligations imposed on the ROLR following the transfer of the failed retailer's customers. Upon acquiring the additional customers and their load, the ROLR(s):

- would be required to provide increased credit support within a couple of days to AEMO to cover the potential spot market energy costs of the customers that it acquires from the failed retailer;
- may be required to provide increased credit support to DNSPs to cover network charges in relation to the acquired customers;
- would likely need to obtain additional hedge cover or be exposed to the spot price for the load of the acquired customers;
- could face considerable increased wholesale energy costs, particularly if a retailer failure occurred at a time of high spot prices;
- could be constrained in its ability to pass these increased costs on to customers due to retail price regulation or competitive pressures; and
- would be constrained by the significant timing gap between when the ROLR has to meet these obligations and when the ROLR is able to recover such costs.

Where a small retailer fails, these obligations may be absorbed relatively easily by the ROLR. In addition, the ROLR gets longer term benefits from expanding its customer base without having to pay to acquire the additional customers.[26]

If the ROLR is unable to meet its increased costs and credit support obligations, it may also be suspended from the NEM. This could trigger a "cascading retailer failure", as other retailers would be appointed as ROLRs and may fail for the same reasons. In these circumstances, it is possible that there may be no-one that can effectively perform the role of designated ROLR.

3.3 Stakeholder views

From the commencement of this review, market participants have agreed that the existing ROLR scheme could contribute to the risk of financial contagion in the NEM.

Both AEMO and the AER also agreed that the ROLR scheme could exacerbate the risk of financial contagion. AEMO considered that the ROLR is unlikely to capable of managing either the failure of a participant with a very large customer base, or the failure of a participant with generation assets as well as customers in its portfolio. AEMO considered that alternative mechanisms beside ROLR need to be developed to manage such situations.[27] The AER raised a concern about the effects on retail competition through changes to market structure if the ROLR scheme transferred a

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26 Appendix D provides case studies of the operation of the ROLR scheme in the case of small retailer failure.

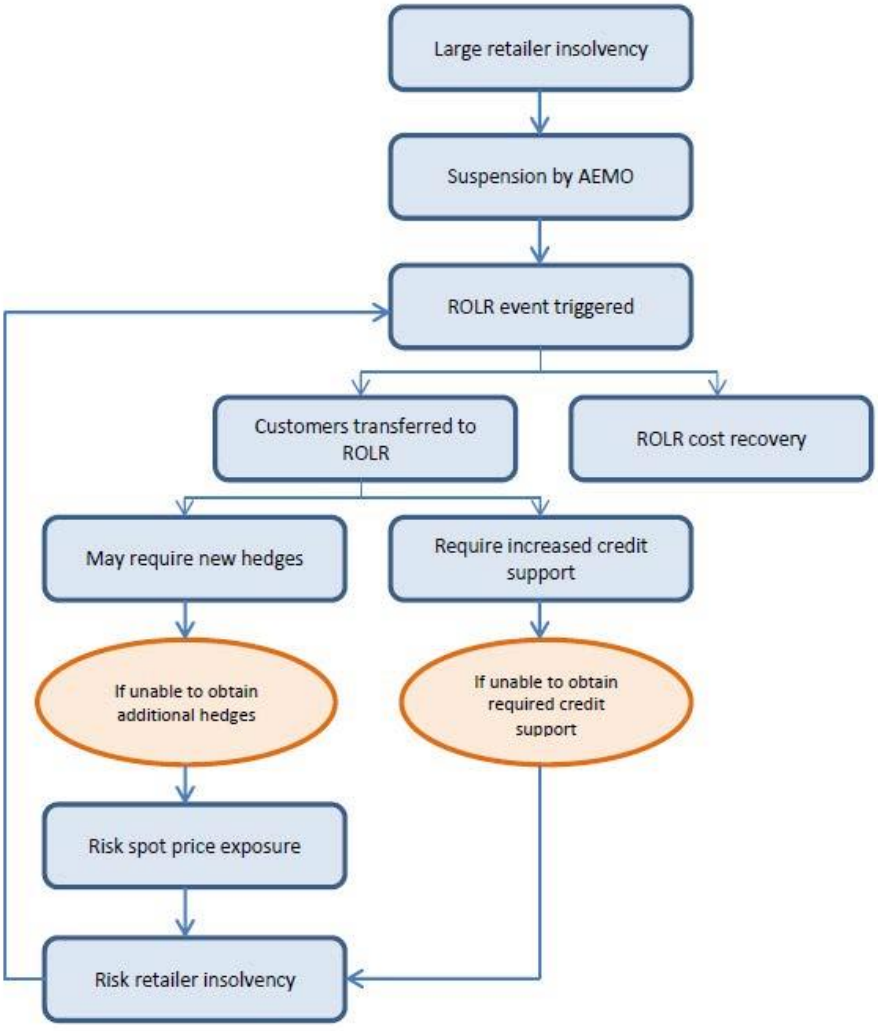
27 AEMO Submission to the NEM Financial Market Resilience Options Paper, 20 March 2013, p2.

large retailer's customers to other large retailers. The AER saw merit in exploring arrangements to support or supplant the ROLR processes in the event of a large retailer failure.[28]

3.4 Implications of the suspension of a large retailer from the NEM

This section steps through the various financial implications of a large retailer suspension from the market and provides the results of some indicative modelling of the magnitude of these implications for the ROLRs in a range of scenarios. These implications are illustrated in figure 3.1 and the key issues are explained below.

Figure 3.1 Potential effects of a large retailer insolvency



3.4.1 Modelling scenarios

In order to understand better the materiality of the implications of the failure of a large retailer, we conducted some modelling. We estimated both the credit support implications and the wholesale energy purchase costs on ROLR(s) under a number of

28 AER, Submission to the NEM Financial Market Resilience Issues Paper, 31 July 2012, p3.

scenarios reflecting different market shares of both the failing retailer and the ROLRs. We estimated these implications during both normal and high price conditions, with the high price conditions based on market outcomes during the 2007 drought. Further details on our modelling assumptions are set out in appendix E.

The Commission's estimates are not comparable to the modelling results provided by Seed Advisory and presented in the previous chapter, as the assumptions and methodologies are different.

The three scenarios modelled were:

- **Scenario 1:** Failure of a retailer with a market share of consumption across the NEM and in each region of 20 per cent and the equal allocation of that retailer's customers to two other retailers also with market shares of 20 per cent 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 ROLRs' customer loads of approximately 50 per cent;
- **Scenario 2:** Failure of a retailer with a market share of consumption across the NEM and in each region of 30 per cent and the equal allocation of that retailer's customers to two other retailers with market shares of 15 per cent each. All other retailers are assumed to be smaller. This would represent a notional doubling in the size of the ROLRs' customer loads; and
- **Scenario 3:** Failure of a retailer with a market share of consumption across the NEM and in each region of 30 per cent and the entire allocation of that retailer's customers to one other retailer with a market share of 15 per cent. All other retailers are assumed to be smaller. This would represent a notional tripling in the size of the ROLR's customer load.

Under all scenarios, we assumed that Standard & Poor's credit rating of the two 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 largest retailers 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).

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 retail market share of well over 30 per cent.

In the current market structure, the majority of large market participants have a mixture of both retail and generation portfolios. Financial implications for other participants across both the retail and generation sectors have not been modelled.

3.4.2 AEMO credit support requirements

Potentially the most significant and immediate impact on the ROLR would be the need to provide additional credit support to AEMO due to its increased customer demand.[29]

Table 3.1 Impact on AEMO minimum collateral requirements for each ROLR

Scenario	Pre-failure MCL requirements - normal prices	Post failure MCL requirements - normal prices	Pre-failure MCL requirements - high prices	Post failure MCL requirements - high prices
Scenario 1: ROLR market share increases from 20% to 30%	$196 million	$294 million	$672 million	$1008 million
Scenario 2: ROLR market share increases from 15% to 30%	$147 million	$294 million	$504 million	$1008 million
Scenario 3: ROLR market share increases from 15% to 45%	$147 million	$441 million	$504 million	$1512 million

Under scenario 1, the additional credit support ROLRs could be required to provide to AEMO would increase by between $98 million (under normal conditions with an average price of $30/MWh) and $336 million (under high price conditions of June 2007 with an average price of $60/MWh).

This amount increases to $812 million if the default is a trigger for spot prices to change from normal conditions to a period of increased high prices. Under scenario 3, the additional credit support required to be provided by the ROLRs to AEMO is substantially higher and would range between $294 million (under normal conditions) and over $1 billion (under high price conditions).

If the ROLR did not provide additional credit support to reflect its increased minimum collateral requirement, AEMO would issue a default notice. The ROLR would then be required to provide substantial additional credit support within one day. If the ROLR fails to provide the additional credit support within the required timeframe, AEMO would be expected to suspend it from the NEM. A retailer that has been suspended from the NEM would not be able to continue to trade and insolvency would almost certainly follow.

The ability and cost to get this credit support would be subject to the prevailing market conditions and the attitude of the financial sector towards risks in the NEM. In adverse market conditions, credit support providers may be reluctant to provide additional

29 See section 2.2.1.

support. Accordingly, obtaining this credit support is likely to be a critical challenge for any retailer that is appointed as a ROLR in the event of a large retailer failure.

3.4.3 DNSP credit support requirements

Chapter 6B of the NER sets out the terms of the DNSP credit support that retailers are obliged to provide. The purpose of DNSP credit support arrangements is to manage the risk of non-payment of network charges. These provisions supersede the previous jurisdiction-based schemes and apply as part of the NECF.[30]

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 per cent of its annual network charges billed to all retailers.[31]

Table 3.2 Impact on DNSP credit support requirement for each ROLR

Scenario	Increase in DNSP credit support
Scenario 1: ROLR NEM market share increases from 20% to 30%	$186 million
Scenario 2: ROLR NEM market share increases from 15% to 30%	$186 million
Scenario 3: ROLR NEM market share increases from 15% to 45%	$699 million

The modelling demonstrates that the ROLRs would be likely to be required to increase their credit support with DNSPs as a consequence of acquiring additional customers under the situation of a very large retailer failure. This increased credit support would need to be provided within ten business days of a request from the DNSP.

We note that under these scenarios, prior to the failure of the retailer, the DNSP would be receiving no level of credit support from any retailer. This is because the ROLRs' credit outstanding amounts were below their maximum credit allowances. Therefore, the effect of the retailer failure would be to increase the total level of credit support provided to DNSPs. This would occur as, following the failure, DNSPs (collectively across the NEM) would be owed 60 per cent of their revenues from two BBB- rated

30 In those jurisdictions that have adopted the NECF.

31 Further explanation on the DNSP credit support formula and the modelling results is set out in the report from Frontier Economics, on policy responses to mitigate the risk of financial contagion in the NEM, July 2014.

retailers. Prior to the failure, they would be owed the same, but from three BBB- rated retailers.[32]

3.4.4 Additional hedging requirements

The failure of a large market participant would affect other participants' hedging arrangements in two ways:

- the ROLR would likely be unhedged in relation to the acquired customers and will need to obtain additional hedge cover or be exposed to the spot price for the load of the acquired customers; and
- market participants would have to replace any OTC hedge contracts held with the failed retailer. This could also include the ROLR if it has any OTC contracts with that failed retailer.

Table 3.3 provides estimates of the increase in weekly settlement amounts for the ROLR(s) under the three scenarios.

Table 3.3 Impact on weekly settlement amount for each ROLR

	Increase in settlement under normal price conditions	Increase in settlement under high price conditions
Scenario 1: ROLR NEM market share increases from 20% to 30%	$12.25 million	$21 million
Scenario 2: ROLR NEM market share increases from 15% to 30%	$18.4 million	$31.5 million
Scenario 3: ROLR NEM market share increases from 15% to 45%	$36.75 million	$63 million

The modelling shows that the ROLR may be required to fund up to $63 million extra a week to cover the energy costs of the acquired customers. The ROLR would have to fund this either through its own existing working capital, financial provisions, or organise finance in the interim before it could pass through these costs onto customers.

Obtaining additional hedge cover for the extra customers would provide protection for the ROLR against the high spot prices. However, the ROLR would still need to fund the cost of those hedges, which we have estimated to be roughly equivalent to the estimated settlement spot price. Therefore, under normal conditions, the ROLR would be required to fund $12.25 million a week under scenario 1 for a period of time until it is able to recover that cost from invoicing the ROLR customers. Given that NEM settlement takes place four weeks after the trading day, there could be sufficient time for the ROLR to

32 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. - See MCE Bulletin 192.

have in place the increased funding arrangements to be able to purchase energy for the customers transferred under the ROLR scheme.

It is difficult to assess whether the ROLR would also suffer costs associated with that participant defaulting on its hedge contracts. This would depend on the extent to which retailers are exposed to one another through the OTC contract market. Given that large retailers tend also to have generation assets, it is possible that they enter into hedge contracts with each other.

3.5 Commission's considerations and conclusions

Additional financial burdens on ROLRs from the transfer of large volumes of customer would be substantial. This could result in the ROLR(s) subsequently failing. Potentially, this could lead to a cascading failure of multiple retailers.

The ROLR would need to make additional purchases of electricity in the wholesale spot market to cover the inherited retail load. As wholesale market settlement occurs roughly four weeks in arrears, the ROLR would have to find the additional cash required for settlement within that time. If spot market prices were high, this burden could be compounded.

As the ROLR would increasingly enter into new hedge contracts to cover the additional load in the weeks and months following the ROLR event, the spot price exposure would gradually diminish.

The ROLR(s) would be required to provide additional credit support to AEMO and DNSPs. Under the current rules, this credit support is required within short timeframes. If the ROLR event occurs at a time when the financial market faces a degree of distress, it may be difficult to find sources of finance, or finance may be provided at a higher cost than under normal circumstances.

Also, the ROLR(s), and also AEMO, need to have the capability to transfer a large number of customers within a short timeframe. This includes having in place, for example, appropriate software and billing systems. Also, if customer information is not transferred efficiently from the failed retailer to the ROLR, it would inhibit the ROLR's ability to hedge the new load (since it would have incomplete information about load characteristics) and establish effective customer communication and billing arrangements.

3.6 The risk of financial system instability in the NEM

While the NEM has a good track record of dealing with financial distress, episodes of financial distress have occurred in other electricity markets and businesses can and do fail.

Of the financial interdependencies in the NEM, OTC contracts create the most potential risk to financial system stability in the NEM, via counterparty default. While the probability is uncertain, there is a risk of financial contagion occurring through OTC contract counterparty default. Whether or not this would occur would depend on a broad spectrum of variables and the unique circumstances of individual market participants at the time.

We consider that the risk of financial system instability in the NEM occurring via this channel would most likely materialise if it leads in turn to the failure of a participant with a large retail load rather than a participant with significant generation capacity. Our reasons for this are as follows:

- Retailers could experience substantially larger losses than generators from OTC counterparty default. This is due to the asymmetric range of wholesale spot prices. Spot prices can range from the market floor price of -$1,000/MWh to the market price cap of $13,500/MWh. A retailer would suffer large losses if the OTC counterparty default occurred at the same time as high spot prices. A generator experiencing counterparty failure is less likely to suffer substantial financial losses due to the fact that spot prices are seldom significantly negative and in any case cannot descend many thousands of dollars per MWh below typical contract strike prices and as long as the generator is able to sell its capacity at spot prices;
- The failure of a large retailer would trigger the operation of the ROLR scheme. In these circumstances, the application of this scheme may also create a risk to financial system stability in the NEM, due to the significant financial challenges it would place on ROLRs when taking on large volumes of customers in a short period of time. Indeed, this risk would occur regardless of the source of the retailer failure (whether emanating from OTC counterparty default or otherwise).

Our conclusions are drawn having considered the most likely scenarios, given current industry structure.[33]

33 There is an alternative scenario in which a large generator defaults on its OTC contracts this triggers a number of small to medium retailers to fail. Collectively, these retailers may hold a significant share of the retail market load. This scenario would require, amongst other things, the following to occur: all the retailers would need to have a high level of exposure through their OTC contracts with the same large generator; and all the retailers' financial positions at that time meant that they could not absorb the losses associated with the counterparty failure, without also simultaneously failing. In such a scenario, the failure of a number of small to medium retailers could have implications for the NEM, depending on how many other retailers would be available to act as ROLRs and how the ROLR scheme was designed.

4 Assessment of current arrangements to identify and mitigate risks to financial stability in advance

There are arrangements in place that seek to identify and mitigate in advance risks to financial system stability in the NEM. The most important of these are market participants' risk management practices.

It would be inappropriate to assume that risk management practices can be solely relied on, or expected, to eliminate all risk to financial system stability in the NEM. Even with very diligent risk management by participants, there could still be a remaining risk because:

- a participant's incentives to manage risk carefully would not necessarily take account of the potential systemic consequences of its failure;
- the potential for participant failure to trigger financial contagion would depend on a wide range of factors and the circumstances at the time, all of which are difficult to quantify or judge in advance;
- risk management practices are unlikely to allow for the additional liabilities associated with becoming a ROLR under a large retailer failure situation;
- industry structure may limit the possibility for participants to adequately diversify risk among a wide number of counterparties; and
- it would be impossible for participants to have all the information needed to correctly assess the probability of counterparty failure under OTC contracts and the impacts of such a failure on their businesses.

Commercial attitudes may also change over time, and there is no guarantee that existing risk management practices will continue to be appropriate in the future.

A number of participants also maintain an Australian Financial Service Licence (AFSL). Requirements under the AFSL do not aim to preserve financial system stability in the NEM.

This chapter sets out the Commission's considerations regarding a number of arrangements that are in place to minimise the risks to NEM financial system occurring through counterparty defaults under OTC contracts. These arrangements include:

- risk management by market participants;
- external regulatory arrangements; and
- transparency and reporting obligations.

4.1 Internal risk management by market participants

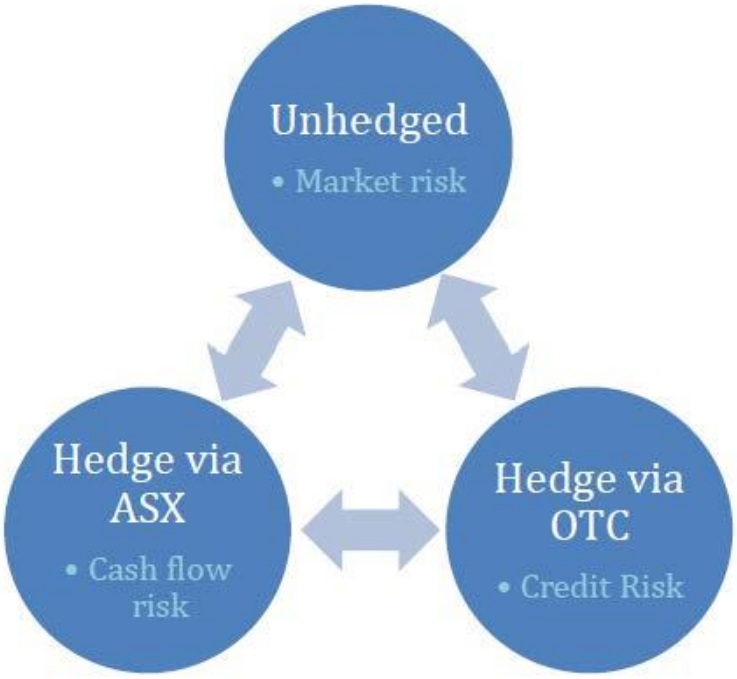
4.1.1 Description

Risk management in the NEM involves continuous trade-off decisions regarding the degree to which participants are willing to be exposed to the various sources of risk described in chapter 2. For example, participants may use OTC contracts to manage market risk, but this increases their exposure to credit risk arising from the possibility of

a counterparty defaulting on its obligations under the OTC contract. Some participants have stated that, of these risks, exposure to the spot price is the main risk.[34]

To illustrate the risk trade-off, GDF Suez provided the following diagram:

Figure 4.1 Risk trade-off



Taken from: submission by GDF Suez to the stage two options paper, 19 November 2013, p2.

Managing these risks is an integral part of a participant's day-to-day operations. Risk management is embedded in a framework both of internal policies and external risk management obligations. Risk management 'practices' includes documentation of procedures and policies, as well as how these procedures and policies are applied in practice.

As part of this review, the AEMC has engaged with participants to better understand their approaches to managing risk in the NEM. In discussions with the AEMC, participants have argued that, because of the nature of risks in the NEM, they face strong commercial incentives to have adequate risk management practices in place in order to remain in business.

Participants' risk management strategies generally address risks faced by the organisation as a whole, not just risks related to activities in the NEM. Similarly, the inter-relationships between NEM participants - and their associated risks and exposures - may involve activities outside the electricity sector, in addition to their NEM activities (eg, gas supply).

34 Submissions to the stage two options paper by Alinta Energy, 18 December 2013, p3; ERM Power, 18 December 2013, p9; GDF Suez, 19 November 2013, p2; and Macquarie Generation, 20 December 2013, p3.

In discussions with the AEMC, participants:

- indicated they have internal risk management frameworks approved at board-level that determine overall risk management parameters. These parameters include the business's 'risk appetite', trading limits and counterparty credit limits.[35]
- explained that it is 'industry best practice' to segregate trading, middle office and back office functions within the company. The trading of financial products is undertaken by the front office, while the middle office ensures the control and processing of transactions. The back office conducts the administrative functions that support trading, such as record keeping, trade settlement and regulatory compliance.
- generally appear to manage their exposure to counterparties by restricting the size and duration of their transactions, depending on the creditworthiness of each counterparty. Participants also use regular valuation of their exposures and, to a lesser extent, periodic stress tests, to assess their risk positions. Also as noted in chapter 2, participants are also managing risk internally, through vertical integration.

ASIC review of OTC electricity derivatives market participants risk management policies

ASIC has recently completed a review of the written risk management policies and related documentation of some Australian financial services licensed entities that deal or make a market in OTC electricity derivatives in Australia (market participants).[36]

Regarding the scope of the review, ASIC noted that:

> "Our review principally focussed on the content of written risk management policies and practices of the market participants surveyed. We therefore did not undertake a comprehensive survey of how each market participant implemented each of the policies they provided details to us about. "[37]

The review is a follow-up to earlier publications by ASIC on the adequacy of risk management by NEM participants.[38] In these earlier publications, ASIC raised concern about the degree of counterparty credit risk in the NEM:[39]

The recent review was conducted among 19 non-bank NEM participants, including retailers, generators, generators with a retail arm (gentailers), renewable energy

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35 Typically, risk committees consisting of senior managers are responsible for day-to-day internal risk management oversight. Oversight functions are supported by internal reporting policies.

36 ASIC, *Review of OTC electricity derivatives market participants' risk management policies* - Report 390, April 2014.

37 ASIC, *Review of OTC electricity derivatives market participants' risk management policies* - Report 390, April 2014, p4.

38 ASIC, *Electricity derivative market participants: Financial requirements* - Consultation Paper 177, May 2012; and *Response to submission on CP177 electricity derivative market participants: financial requirements* - Report 320, December 2012.

39 ASIC, Ibid, Report 320, p13.

providers and electricity traders. As part of this survey, ASIC benchmarked participants' existing arrangements against industry best risk management practice.

ASIC reviewed the written documentation provided by participants according to a number of categories of interest, such as corporate governance, credit support and risk metrics. Some of the most used strategies and corporate governance arrangements that ASIC found are included in table 4.1.

Table 4.1 Mainstream risk management practices by NEM participants

Characteristic	Practice	Percentage[40]
Policies	Risk management policies	100%
	Risk limits	95%
Credit support	ISDA master agreements	84%[41]
	Counterparty limits	84%
Governance	Risk committee	100%
	Risk committee escalation	100%
	Roles and responsibilities	89%
	Front, back and middle office segregated	79%
Valuation	Mark-to-market methods	84%

Taken from: ASIC, *Review of OTC electricity derivatives market participants' risk management policies* - Report 390, April 2014, p11.

ASIC's main findings are summarised in Box 4.1.

40 Percentage of surveyed participants that used a particular practice. This table includes those practices that ASIC found were used by more than 75% of the surveyed participants.

41 Not all of the users of an ISDA master agreement also have a Credit Support Annex to the ISDA agreement in place that deals with collateral requirements. According to the ASIC survey, 53% of the surveyed participants have a Credit Support Annex in place.

Box 4.1: ASIC conclusions on risk management policies

ASIC stated that:

> "Generally, we consider that market participants' risk management policies and practices appear to be appropriate to the nature of their business, taking into account the size and complexity of the financial services business they conduct."[42]

Some more detailed findings included the following:

- On the basis of the documentation reviewed, ASIC found that although the risk management practices of market participants are varied, they are generally quite comprehensive. ASIC did not identify any areas of significant concern;
- While ASIC noted that the documented risk management practices varied, ASIC found that the market participants' documentation addressed many of the main risks which it considered relevant;
- ASIC considered that the breadth, depth and innovative nature of the documentation of medium-sized market participants was the most impressive. Some of the best aspects of their documentation were that directives and tools for risk management were clearly set out and could easily be understood by traders and management;
- ASIC noted that, although smaller-sized market participants did not have equally comprehensive policies, in many cases it considered their documentation appropriate to the nature, size and complexity of their electricity derivatives business. A few smaller-sized market participants also had documentation that was similar in quality to some of their larger peers.[43]

ASIC maintained its concerns about the degree of concentration on the market:

> "The interconnectedness of market participants, and the relatively small number of market participants with a significant market presence, creates concentration risk."[44]

ASIC noted that market participants recognise that it is good risk management practice to address concentration risk in risk management policies, for example, by providing for the effective monitoring and review of credit limits and usage.[45]

42 ASIC, *Review of OTC electricity derivatives market participants' risk management policies* - Report 390, April 2014, p4.

43 Ibid, p9.

44 Ibid, p18.

45 Ibid, p21.

4.1.2 Commission considerations

Participants' risk management practices reflect the commercial incentives on participants to adequately manage their risks and protect themselves from the impacts of other participants' failure. We note ASIC's conclusions that participants' practices appear to be appropriate to the nature of their business, taking into account the size and complexity of the financial services business they conduct. ASIC's conclusions must be viewed in that context and, more broadly, having regard to ASIC's functions of promoting market integrity and consumer protection.[46]

The Commission considers that it would be inappropriate to assume that risk management practices can be solely relied upon, or expected, to eliminate all risk to financial system stability in the NEM. Even with very diligent risk management by participants, there could still be a remaining risk, for a number of reasons:

- A participant's incentives to manage risk carefully would not necessarily take account of the potential systemic consequences of its failure. While a single participant has an incentive to avoid failing, its assessment of its appropriate risk-reward trade-off would only have regard to the potential loss of its own investors' equity in the event of its failure – it would not choose a level of risk exposure that has regard to the potential harm its failure could inflict on the system as a whole. In other words, an individual business's choice of risk and return would not take into account the potential harmful 'spillover' costs in the event its failure triggers a financial contagion.
- The potential for participant failure to trigger financial contagion would depend on a wide range of factors and the circumstances at the time, all of which are difficult to quantify or judge in advance. It would be very difficult and costly for businesses to insure themselves fully against such an uncertain, extreme event.

Even putting the above issues aside:

- risk management practices are unlikely to allow for the additional liabilities associated with becoming a ROLR under a large retailer failure situation.
- industry structure may limit the possibility for participants to adequately diversify risk among a wide number of counterparties.
- it would be impossible for participants to have all the information needed to correctly estimate the probability of counterparty failure under OTC contracts and the impacts of such a failure on their businesses and other parties.

Insurance against unknown, uncertain events

Good performance in the face of past scenarios could lead to a difficulty with participants of imagining appropriately severe economic conditions as part of testing their risk management practices. The previous Chairman of the Australian Prudential Regulation Authority (APRA) made a similar comment in light of the good performance of the Australian financial system during the global financial crisis:

46 Section 12A of the Australian Securities and Investment Commission Act 2001 (Cth).

> "The lack of severe stress experience can lead to reluctance by institutions to contemplate their own mortality and a willingness to dismiss as implausible scenarios that would drive financial losses. Scenarios built on benign experience will underestimate potential stress and provide false confidence."[47]

Limited possibilities to diversify risk

By contracting with a number of counterparties, participants could reduce their exposure to the risk of a given counterparty failing.

This requires a sufficient number of suitable participants in the market that could serve as alternative counterparties. The more suitable potential counterparties there are operating in the market, the more easily the risk of counterparty default can be spread across multiple counterparties.

Compared to financial markets, the NEM has fewer participants. There are benefits to this concentration, because it means that participants are likely to have more knowledge of their counterparty risks. Also, the presence of some level of concentration may in fact reflect a lack of interconnectedness in the market, which can help attenuate the likelihood of a financial contagion. However, the disadvantage of concentration is that it may imply fewer opportunities for participants to diversify counterparty risk.

According to data from the Australian Financial Markets Association (AFMA), electricity trading is largely concentrated between a small number of participants.[48]

As mentioned, ASIC similarly concluded that the interconnectedness and the relatively small number of market participants with a significant market presence creates a concentration risk.[49]

AGL and Origin, in their submissions to the stage two options paper, have questioned whether there is a high degree of concentration in the OTC contract market. They argue that trade between the big three gentailers is in fact modest, and that they are contracting with a wide variety of stand-alone generators and tier 2 retailers as counterparties.[50] Origin included the following graph in its submission to the stage two options paper:

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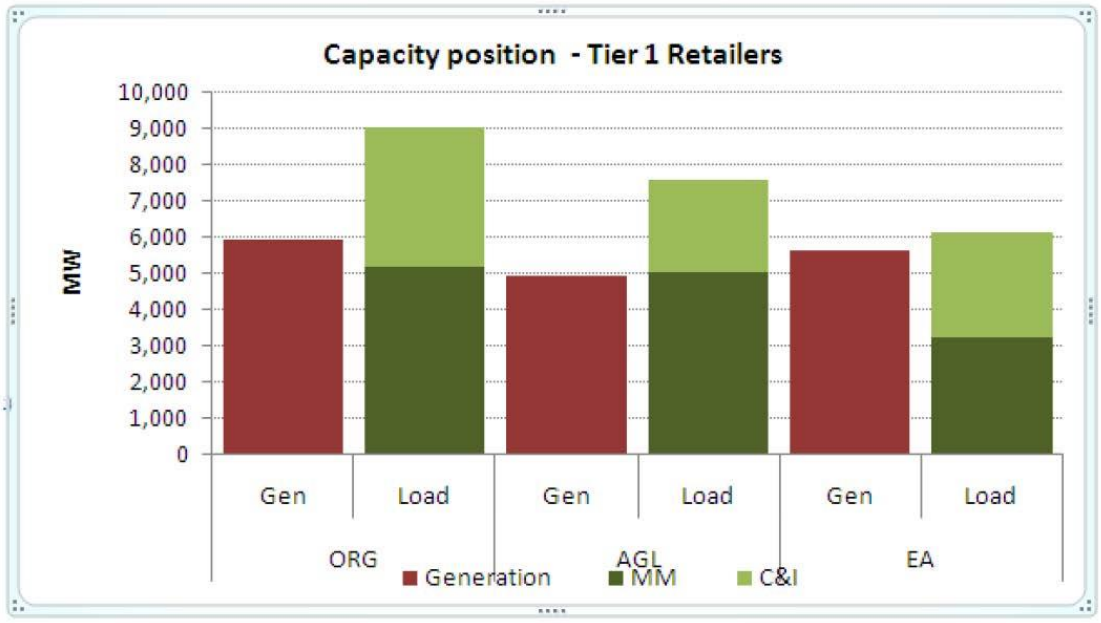
47 J.F. Laker, *The Australian Banking System Under Stress - Again?*, AB+F Randstad Leaders Lecture 2012, 8 November 2012, p5. See also: V. Kaminski, *TXU bankruptcy holds lessons for risk managers*, Energy Risk, 13 May 2014.

48 In the 2012 Australian Financial Markets Report, AFMA estimated the cumulative market share in electricity trading of the top 8 respondents as 91.1%, and that of the top 3 at 71.1%. In the 2013 edition, these numbers were 92% and 58.6% respectively. See AFMA, *2012 Australian Financial Markets Report*, p52, *2013 Australian Financial Markets Report*, p51. It is likely the difference between the top 3 cumulative market share can be partly explained by the fact that EnergyAustralia was not among the respondents in 2012, but responded in 2013.

49 ASIC, *Review of OTC electricity derivatives market participants' risk management policies* - Report 390, April 2014, p18.

50 See submissions to the stage two options paper by AGL, 18 December 2013, p4 and Origin, 19 November 2013, p8/9.

Figure 4.2 Capacity position Tier 1 retailers November 2013



Taken from: submission by Origin to the stage two option paper, 19 November 2013, p9. We note that this graph does not reflect AGL's proposed acquisition of Macquarie Generation on AGL's capacity position.

Based on the capacity position of the three tier 1 retailers, Origin stated that it is highly unlikely that excessive concentration would exist in either the wholesale or contract market in the NEM.[51] To effectively hedge mass market (MM) and commercial and industrial (C&I) customers, tier 1 retailers would be required to contract with either tier 2 retailers, standalone generators, or both. Origin argued that concentration between tier 1 retailers would not be possible based on internal generation capacity, supporting OTC contracts, and highly inefficient were it to occur through the contract market.

Information about the interconnectedness of participants in the NEM via OTC contracts and the exposures under these connections is not available. We note, however, that any concentration risk could increase if liquidity in the OTC contract market decreases. We also note that, even if direct exposure among tier 1 retailers is limited because of lack of contracting amongst this group, they could still be indirectly exposed to one another via common counterparties.

Additionally, while the graph supports the notion that tier 1 retailers are unlikely to have excessive concentration of hedge contracts between each other, it does not address the possibility that the tier 2 retailers and stand-alone generators may have large concentrations of contracts with the tier 1 retailers. Those concentrations increase the risk of financial contagion.

We also note ASIC's concern about the low level of participation of non-electricity businesses in the OTC contract market. Participation by, for example, banks and financial institutions could add additional liquidity in the contracts market and provide a means for participants to diversify risk. Although banks would not have a physical

51 Ibid Origin submission, p9. 'Tier 1 retailer' generally refers to the largest three vertically integrated retailers that were historically the incumbent retailers, whereas 'tier 2 retailer' refers to smaller retailers that entered the market when retail competition was introduced.

hedge to back up their OTC position, they are subject to regulations requiring minimum capital reserves and need to comply with more stringent requirements regarding risk management.

Limited information about counterparty risk

There are limits to what a participant can learn about its OTC counterparty's financial situation on the basis of available information sources (eg, annual reports, information from credit rating agencies). Also, participants will have limited knowledge about interconnectedness in the market, that is, how other participants are linked via OTC contracts and what the exposures under these financial relationships are.

Participants will assess counterparty risk to the best of their ability. They will implement adequate insurance policies to address uncertainty concerning a counterparty's financial position.[52] Residual risks will, however, remain due to the lack of complete information and transparency about other participants' exposures.

4.2 External regulatory arrangements

We have considered whether a number of external regulatory arrangements may contribute to the identification and mitigation of risks to financial system stability in the NEM. The most important of these obligations originate from licence requirements administered by the ASIC.

In addition, certain requirements may arise from debt covenants entered into with financial lenders, and obligations contained in the ASX listing rules for those participants which are listed on the ASX. Because debt covenants could be different for each participant and only a few participants are listed on the ASX, these categories will not be discussed below. In addition, participants are subject to accounting and auditing standards.

4.2.1 Requirements associated with holding an Australian Financial Services Licence

Description

The Corporations Act 2001 (Cth) requires entities dealing in OTC electricity derivatives, such as generators and retailers, to hold an Australian Financial Services Licence (AFSL). Management of this licence requirement is the responsibility of the ASIC.

ASIC has issued a number of relevant regulatory guides which explain how the AFSL regime should be implemented, in particular RG104 and RG166.

Specifically, RG104 states that ASIC expects AFSL holders to have structured and systematic processes in place for identifying, evaluating and managing risks, while RG166 outlines financial requirements that a business needs to meet as an AFSL holder.

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52 For example, market participants could require a counterparty that is considered to be less creditworthy to post collateral against its contractual obligations, or the participant itself could hold adequate financial reserves as a buffer against a potential counterparty default. It is our understanding that such considerations are generally part of NEM market participants' risk management practices.

Box 4.3: Summary of obligations on AFSL holders as set in RG166[53]

Particular among the RG166 requirements are:

- Risk management systems must address risk to financial resources;
- Positive net assets, and sufficient cash resources to cover the next 3 months; and
- Required surplus liquid funds.

Under RG 166, electricity derivative market participants who hold an AFSL are generally subject to two levels of financial requirements.

These are:

- the base level requirements of cash flow and balance sheet solvency and the cash needs requirement (see Section B of RG 166); and
- because licensees incur actual or contingent liabilities by dealing or making a market in derivatives, the requirement to hold adjusted surplus liquid funds equal to the sum of: (i) $50,000; plus (ii) 5% of adjusted liabilities between $1 million and $100 million; plus (iii) 0.5% of adjusted liabilities for any amount of adjusted liabilities exceeding $100 million, to a maximum requirement of $100 million in AFSL.[54]

Participants are also required to prepare a three month forward looking cash flow analysis, which would be updated every quarter.

Commission considerations

Whilst the AFSL conditions contain requirements regarding cash flow planning and minimum tangible assets, these requirements are not prudential requirements.

They are designed to require companies to have the financial and corporate ability to implement their compliance functions and meet their legal obligations, but not to ensure that companies will never fail.

The AFSL financial requirements are minimum financial requirements to promote appropriate financial risk management, taking into account the nature, scale and complexity of an AFS licensee's business. They "are intended to help ensure that cash

53 ASIC, regulatory Guide 166, *Licensing: Financial requirements*, November 2013.

54 Adjusted liabilities is defined as 'the amount of total liabilities as they would appear on a balance sheet at the time of calculation made up for lodgement as part of a financial report under Chapter 2M if the licensee were a reporting entity: (a) minus the amount of any liability under any subordinated debt approved by ASIC that would be included in the calculation; and (b) minus the amount of any liability the subject of an enforceable right of set-off that would be included in the calculation, if the corresponding receivable is excluded from adjusted assets; and (c) minus the amount of any liability under a credit facility that would be included in the calculation, if it is made without recourse to the licensee; and (d) plus the value of any assets that are encumbered (other than assets that are encumbered merely to support a guarantee provided by the licensee) as a security against another person's liability where the licensee is not otherwise

shortfalls do not put compliance with the licensee's obligations at risk."[55] ASIC has stated: "ASIC is not a prudential regulator. Therefore, our financial requirements do not seek to prevent AFS licensees from: (a) becoming insolvent; or (b) failing because of poor business models or cash flow problems."[56]

AFSL requirements have some relevance to (aspects of) risk management, but these requirements do not have as their objective the preservation of financial system stability in the NEM.

The presence of financial reserves determines, to an extent, how a participant is able to cope with the failure of a counterparty. Risk management plays a key role in ensuring an appropriate level of buffer is maintained that is linked to energy companies' risk appetites.

As explained in box 4.2, under the AFSL, ASIC requires electricity participants to hold some financial capital reserves, because they incur actual or contingent liabilities by dealing or making a market in derivatives. This requirement is the only stipulated financial buffer obligation on participants.

The AFSL requirements prescribe a minimum base amount but these requirements are unlikely to be the main driver in determining the actual level of financial buffer held by participants to manage risks. The level of buffer is linked more broadly to participants' risk appetite, their ability to access additional financing, and, in some cases, requirements imposed by lenders under debt covenants.

4.2.2 Accounting and auditing standards

Participants in the NEM are subject to Australian accounting and auditing standards. To help understand the relationship between such standards and risk management practices in the NEM, the Commission sought advice from Deloitte. Deloitte's report is published in conjunction with this second interim report.[57]

In their report, Deloitte recognised that financial reporting and risk management are different functions. Although Australian Accounting Standard AASB 7 Financial Instruments: Disclosure requires both quantitative and qualitative disclosures in relation to risks associated with valuation of reported financial instruments, valuation is the sole extent of the link between the two functions. Deloitte advised that the only inherent link between risk management and financial reporting is through ensuring consistency between valuation of reported financial instruments, such as derivatives, and how participants value risk under their risk management practices.

This means that accounting standards require participants to report on how they have decided to value derivatives contracts and do not directly determine the valuation of financial instruments. The current Australian Accounting Standards relevant to valuation of electricity derivatives are set out in table 4.2.

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55 ASIC, *Response to submissions on CP 177 Electricity derivative market participants: Financial requirements*, RP 320, December 2012, p5.

56 See for example: ASIC, *Electricity derivative market participants: Financial requirements*, CP177, p8.

57 Deloitte, *Accounting and Auditing requirements of market participants in the NEM – derivative valuation*. Report to the AEMC, May 2014.

Table 4.2 Current Australian Accounting Arrangements relevant to Derivative Valuation[58]

Standard	Application
AASB 139 Financial Instruments: Recognition & Measurement	Defines financial instruments (including derivatives) and the accounting treatment thereof.
AASB 13 Fair Value Measurement	Provides guidance on fair value measurement, in particular the requirements of Credit Valuation Adjustments. This standard defines fair value and is applicable when another accounting standard requires or permits fair value measurements or disclosures about fair value measurements. AASB 13 implicitly assumes that the fair value measurement is undertaken on a going concern basis.
AASB 7 Financial Instruments Disclosures	Requires various financial risk management disclosures, both quantitative and qualitative. Qualitative disclosures include financial risk management policy approaches. Quantitative disclosures include various market risk sensitivities, credit quality and liquidity analysis.
AASB 9 Financial Instruments	This standard is gradually replacing AASB 139 Financial Instruments: Recognition & Measurement. The standard can be early adopted and contains new hedge accounting rules.
AASB 132 Financial Instruments: Presentation	Guidance in relation to the classification of financial instruments as financial assets, financial liabilities and equity instruments.

How participants value their derivatives is important because financial reporting is used by participants as one source of information when assessing the creditworthiness of counterparties. In this regard, the accounting standards require that counterparty credit risk be incorporated into the fair value measurement of derivatives. This includes the risk that a counterparty to an OTC derivative will default prior to the expiration of the contract and will not make all payments required under the contract.

Accounting standards provide some general guidance on how participants should calculate this credit risk adjustment but do not specify a common approach. Hence, the participant's own commercial attitudes rather than standards will dictate how counterparty default risk is measured and taken into account.

External audits of the financial report of Corporations Act entities must be conducted in accordance with Australian Auditing Standards issued by the Australian Auditing and Assurance Standards Board.[59] In conducting an audit of the financial report, the overall objectives of the auditor are:

58 Ibid.

59 A financial report must be prepared annually and lodged with ASIC as a requirement under the Corporations Act. See also table 4.3.

- To obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, thereby enabling the auditor to express an opinion on whether the financial report is prepared, in all material respects, in accordance with an applicable financial reporting framework; and
- To report on the financial report, and communicate as required by the Australian Auditing Standards, in accordance with the auditor's findings.

Deloitte also commented on the role of an external auditor. The external auditor's role is to identify and assess the risks of material misstatement from a financial reporting perspective only. To do this, the external auditor needs an understanding of the internal audit function, to the extent that it can validate that the internal audit function has the knowledge and skill to cover, and has in fact covered, the entity's financial instrument activities, as well as the competence and objectivity of the internal audit function.

Due to this reliance of the external auditor on those charged with corporate governance, and the competency of the internal audit function, the auditing standards do not provide detailed guidance in relation to risk management practices in the NEM.

4.3 Transparency and reporting obligations

4.3.1 Description

Under the NEL and NER, energy market bodies collect and report information relevant for the performance of their functions. AEMO collects information on physical plant and network issues that may be useful in monitoring potential threats to system stability. Components of this information, such as the Projected Assessment of System Adequacy and Electricity Statement of Opportunities, can provide useful inputs for monitoring potential physical energy supply issues that affect broader system stability.

In addition, the AER gathers information for the purpose of, among other things, monitoring compliance by participants with the NER and performing its economic regulatory functions.

The above information is not collected, or used for, identification of threats to financial system stability in the NEM. None of the energy agencies collect additional information on participants' derivative exposures.

Financial information about participants is largely limited to information available under the Corporations Act in relation to company obligations, and public disclosure of financial statements for listed entities. Table 4.2 summarises the existing financial reporting requirements for participants.

Table 4.3 Financial reporting requirements for market participants

Reporting requirements	Description
Corporations Act 2001	The Corporations Act requires companies to provide audited financial statements to ASIC at least once a year. Financial statements must adhere to the relevant accounting standards. They are not publicly disclosed, unless required by listing rules. In some instances, Annual Reports can be lodged with ASIC up to 3 to 4 months after the end of the financial year.
AFS licensing requirements	Holders of AFS licenses must notify ASIC of compliance breaches (or likely compliance breaches) of licensing requirements.
ASX listing rules	For listed companies, financial statements and continuous disclosure obligations as defined in ASX Listing Rules must be publicly disclosed. Financial statement disclosures are published at the parent entity and consolidated group levels. Market participants that are subsidiaries or affiliates of broader corporate groups are not required to separately disclose financial statements at the legal entity level.
Other	For market participants with credit ratings, other financial data may be provided to rating agencies. These data may be available to the public (typically through subscription); however, the data are generally in formats tailored to the needs of the rating agency and may not be consistent across market participants.

In addition, the financial regulators, APRA, ASIC and the Reserve Bank of Australia (RBA), annually undertake a survey on OTC market activity. Cooperation with the survey is voluntary. The survey results themselves are not publicly disclosed, but aggregate-level information may feed into the annual Report on the Australian OTC Markets, jointly published by the financial regulators.

4.3.2 Commission considerations

The NEM information requirements provide useful information related to physical and wholesale market activities. This reported information does not identify risks relating to or arising from the financial interdependencies between industry participants.

Further, it is doubtful whether general corporate reporting would provide a useful mechanism for providing insight into risks to financial system stability in the NEM:

- Corporate reporting generally relates to individual businesses and does not, as such, provide a system-wide perspective. Substantial additional analysis would need to be conducted in order to further collate the information for that purpose.
- Information on financial connections to other businesses is not necessarily part of the reported information.
- Information through corporate reporting is often backward-looking (eg annual reports) and may fail to operate as an early warning indicator.

- Some information may only be available in relation to those participants that are listed on the ASX.

In sum, the current regulatory framework lacks transparency to adequately assess systemic risks from the financial interconnections that exist between participants in the NEM. This information is not routinely collected and not otherwise readily available.

Our considerations regarding any transparency measures that could be considered in response to this situation are contained in chapters 10 and 11.

5 Assessment of current arrangements to respond to events that threaten financial system stability

Current arrangements to respond to events that threaten financial system stability in the NEM are not adequate for responding to a situation of a large participant failure. This is because:

- current arrangements that restrict or cease the operation of a failing participant in the market:
  - do not allow all relevant issues to be taken into account when responding to a participant failure;
  - do not provide the flexibility that is needed in such a situation;
  - do not provide a comprehensive framework for decision-making and coordination across all relevant governments and market bodies; and
  - are unclear as to how governments' interests are incorporated in the process.
- in the case of the ROLR scheme, its application following the failure of a large retailer could threaten financial system stability in the NEM; and
- if a large participant failure would also cause physical supply concerns, it is unclear whether the current arrangements would be able to maintain the generation assets of a failed company in the market;

Without adequate arrangements in place, events such as the failure of a large participant could result in severe financial distress and threaten financial system stability in the NEM. This could affect multiple NEM participants and, ultimately, consumers of electricity. In the long run, the NEO could also be adversely impacted. For various reasons, in such a situation, government may need to step in to protect the physical and financial integrity of the NEM.

This chapter sets out the Commission's analysis and conclusions regarding the adequacy of arrangements that currently exist to manage and respond to events that threaten financial system stability in the NEM.

5.1 Arrangements to respond to events that threaten financial market stability

We have outlined in chapter 3 how the failure of a large market participant could result in widespread financial contagion in the NEM, potentially cascading into further failures. The impacts of such an event would be damaging to the NEM and consumer and investor confidence.

It is therefore important that the arrangements that apply in the event of a large participant failure are clear and robust, and allow for an effective response in such a situation.

There are two categories of arrangements:

- arrangements that restrict or cease the market operations of the failing participant where it is no longer able to meet its financial obligations; and
- arrangements that deal with the consequences of a participant having failed:
  - the ROLR scheme; and
  - general insolvency arrangements under the Corporations Act.

In addition, there are security of supply provisions that may be relevant if a failure coincides with physical supply concerns. Related to this is the question of whether the current arrangements could enable the generation assets of a failed company to continue operating in the market.

In practice, depending on the operations and activities of the failing participant, both financial and physical impacts may occur. This is especially the case for large vertically integrated participants, with activities in both retail and generation, and across multiple regions in the NEM.

With the exception of the ROLR scheme, which was discussed in chapter 3, the above arrangements are discussed in the sections below.

5.2 Arrangements that restrict or cease the market operation of the failing participant

5.2.1 Description

When a NEM participant cannot meet its financial obligations for operating in the market, arrangements are in place that could effectively restrict or cease its operations. The rationale is to protect the integrity of the market against the continuing build-up of financial liabilities that are not likely to be met.

The various decisions relate to whether or not to:

- suspend the participant from the market;
- revoke the participant's retailer authorisation;
- cancel or amend the participant's AFSL; and
- issue a ROLR notice.

Box 5.1: Arrangements that restrict or cease the market operation of the failing participant

Default and suspension

If a participant cannot meet its financial obligations in the spot market, AEMO may, under the NER, issue a default notice to the participant, specifying the default and requiring its remedy. If the default is not remedied by the time specified in the default notice, AEMO may issue a suspension notice, under which AEMO notifies the defaulting participant of the date and time from which it is suspended from trading. Suspension from the market, in the case of a retailer, would constitute a 'ROLR event' and trigger the ROLR scheme.

Revocation of a retailer authorisation

In order to be active in the NEM as a retailer, a participant must hold a retailer authorisation. When a retailer is no longer able to meet its financial obligations under its retailer authorisation, this authorisation may be revoked. This decision is made by the AER or a state regulator, depending on whether the NECF has been adopted in the NEM jurisdiction. Revocation of a retailer's authorisation would constitute a 'ROLR event' and trigger the ROLR scheme.

Cancel or amend an AFSL

As they trade in derivative contracts , participants must hold an AFSL. If the licence holder has not complied with the its obligations, ASIC may require an AFSL holder to remedy the breach. ASIC may also suspend or cancel an AFSL in such a situation. If the licence holder becomes insolvent, ASIC may immediately suspend or cancel its licence.

Issuing a ROLR notice

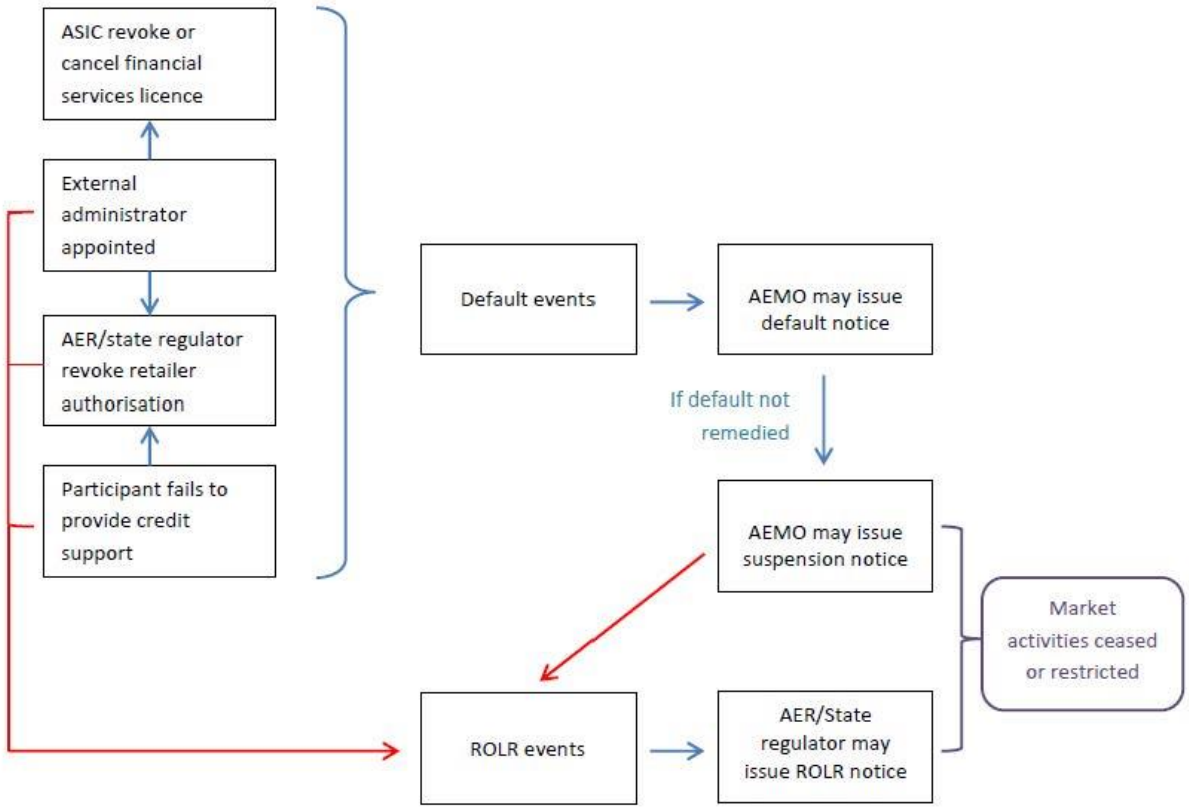
Suspension of a retailer from the market or the revocation of its authorisation would constitute a 'ROLR event' in relation to a retailer under the NERL. The same applies in the event of the appointment of an insolvency official. These events would trigger the application of the ROLR scheme in respect of the failing retailer. Where the NECF applies, the AER may issue a ROLR notice, in which it states the date on which the customers of the failed retailer are to be transferred to the relevant designated ROLR(s).

The various decisions are described in more detail in appendix G.

Some of these decisions also interact. For example, the revocation of a retailer authorisation or licence may trigger the issuing of a default notice under the NER, or may also trigger the issuing of a ROLR notice under the NERL or an equivalent jurisdictional scheme.[60] This potential interaction is illustrated by the following diagram:

60 Appendix F contains the list of events which could trigger a default notice and also the separate list of events which could trigger application of the ROLR scheme.

Figure 5.1 Relationships between decisions in the event of a participant default



5.2.2 Commission considerations

As is clear from Box 5.1, when a participant fails, a number of market bodies would be considering decisions that could effectively restrict or cease the market operation of the participant. In the current arrangements, the frameworks under which these decisions are made do not distinguish between a large participant failure and a smaller participant failure.

In practice however, the failure of a large participant would have very different consequences for the market compared to a smaller participant failure.

Managing and responding to a large participant failure would be complex and would require consideration of a wide range of factors at the same time. Various governments and market bodies would need to be involved. Relevant decisions would need to be made within a short timeframe, so timing in decision-making is also critical.

We consider that the current arrangements are not adequate for responding to a large participant failure. This is for a number of reasons:

- A large participant failure would likely require different solutions compared to a smaller participant failure in order to develop the best response to mitigate the risk of contagion in the market. This requires new decision-making and a clear and flexible 'toolkit' of options, which are not available under the current arrangements.

- Responding to a large participant failure would require consideration of a wide range of issues. Under the current arrangements, there is a risk that not all relevant issues, including financial market stability considerations, could be taken into account by the various decision-makers and on the basis of the information available to them.
- In the event of a large participant failure, decisions need to be made in a coordinated manner in order to avoid contradictory outcomes. Currently, there is no comprehensive framework for decision-making and coordination across all relevant governments and market bodies.
- Governments will be critically interested in a large participant default and will seek to maintain consumer and market confidence and ultimately, if needed, step in with support. It is unclear how governments' interests are incorporated in the current process.

New decisions, better 'toolkit' of response options

We have explained how the ROLR scheme may not be the most appropriate response to every large retailer failure. Very large participants are likely to have substantial retail activities across a number of different NEM regions. They may also have substantial generation assets. A large participant failure would therefore have national implications.

A large participant failure would also be complex, and the circumstances around the failure of a large participant would be different in each case. This means that no single set of arrangements would be appropriate in all situations. Any solution would need to be tailored to the specific case of the defaulting participant and the market situation at that time.

Not all relevant aspects may be taken into account

Under the current arrangements, no individual organisation can properly take account of all the factors relevant to avoiding financial contagion and threats to financial system stability in the NEM. Responding to a large participant failure would require consideration of a wide range of factors, such as:

- retail and generation activities;
- activity in the financial sector;
- financial and physical aspects of the market; and
- impacts across multiple regions.

In addition, issues such as maintaining consumer and investor confidence and competition issues would also need to be evaluated.

Discretion and judgement would need to be exercised in each situation when developing the most appropriate response. Relevant decisions need to be made within a short timeframe, so timing in decision-making is also critical.

No comprehensive framework for cooperation and coordination

It also follows from the previous point that cooperation and coordination between relevant organisations at a time of a large participant failure would be critical.

Without both, decisions:

- would be made in isolation;
- could lead to contradictory outcomes; and
- could be mismatched in terms of timing.

In theory, AEMO could decide, given the particular circumstances of the case, not to suspend a defaulting participant from the market. However, that participant's operation in the market could effectively be restricted if the AER or a state body decided to revoke the participant's licence or ASIC chose to revoke the participant's AFSL.

Currently, there is some cooperation and coordination between certain market bodies. For example, AEMO and the AER have in place coordination arrangements for dealing with ROLR events. There are also arrangements in place between AEMO and various state bodies for dealing with emergency situations of security of supply.

For a large participant failure, more comprehensive and broader cooperation and coordination would be required, covering all relevant market bodies and government.

No clear incorporation of government interests

Governments would be critically interested in a large participant default, for a variety of reasons. These include being aware of the situation to help maintain confidence in the market and in the minds of consumers, as well as ultimately being prepared to step in and provide financial support, if required.

Currently, there are administrative arrangements for market bodies to inform governments of a participant failure. However there is no formal, institutional structure for involving governments in the event of a large participant failure. It is also unclear how government considerations could be taken into account, or how government would be involved or advised on the best response in the event of a large participant failure.

5.3 External administration

5.3.1 Description

A company may be placed in one of the forms of external administration whereby the directors of the company relinquish control to an insolvency practitioner who conducts the affairs of the company.

Should an electricity retailer go into a traditional form of external administration, the most common primary objective of the insolvency practitioner appointed would be to obtain the best financial recovery possible for the retailer's creditors.

Where there is financial benefit to creditors in doing so, this may involve the practitioner continuing to trade the company while it undergoes a process of rehabilitation or to allow for the sale of its business or assets as a going concern. Where there is no financial benefit to creditors in continuing to trade the company, the practitioner may instead cease trading the business and focus solely on realisation of the company's assets, even if this action were to be severely detrimental to the retailer's customers.

The administrator has a duty to conduct the administration in the best interests of creditors and for the purpose of achieving these objectives.

The administrator of a company under external administration is personally liable for debts he or she incurs in the performance or exercise, or purported performance or exercise, of any of his or her functions as administrator. In exchange, the administrator has an indemnity out of the company's assets for the payment of such liabilities.

Importantly, there is no stay on the ability of contracting parties to exercise their rights to terminate contracts of supply or purchase of goods or service when a company is under administration.

Voluntary administration is the most common method of reorganisation. Voluntary administration is a procedure designed to salvage companies which are either insolvent or likely to become insolvent so that the company can return to trading or provide a better return for creditors than would be available in liquidation.

5.3.2 Commission considerations

If a large participant failed, traditional external administration may not be relied on for meeting public policy objectives, because:

- the primary **objective** is to obtain the best financial recovery possible for the creditors of the business. This may lead to actions that are not consistent with the NEO, for example:
  - decisions may be made to cease trading and focus on realising the company's assets, even if this threatens retail services to customers, or the security of supply to the NEM.
  - the focus is on the individual business and its creditors, rather than broader concerns such as the stability of the NEM. Accordingly, actions may not be consistent with mitigating the risk of financial contagion. For example, the failure of a large participant leaves its OTC contract counterparties without hedges, so those counterparties must either try to re-contract with other parties, or be exposed to spot market prices. Given the volatility of spot prices, this could lead to cascading financial distress and failure in the NEM, particularly if the initial large participant failure occurred in a challenging commercial environment (eg, due to extreme spot prices, or a lack of liquidity in financial markets).
- the **timeframes** governing activities in the NEM may make it challenging to resolve a major corporate failure before the participant is suspended from the wholesale spot market. One of the triggers for AEMO to issue a default notice is insolvency, or the appointment of an administrator (see appendix G).[61] If one of the triggers for default from the NEM occurs then the situation could escalate rapidly.

In addition, under current insolvency laws, it is unclear what rights the government would have to appoint a receiver or administrator, and there is no mechanism to

61 NER, clause 3.14.21 (a)

prevent other parties doing so first, which would trigger the ROLR and suspension processes. This contrasts with some special administration arrangements for other critical services.[62]

The existence of the ROLR scheme recognises the limitations of normal insolvency laws when managing a retailer failure. Effectively, it complements the application of such laws by transferring the customers of the failed retailer to another retailer(s) who become responsible for the customers.

In chapter 7, we consider alternatives to traditional forms of external administration and the ROLR scheme, that could be more appropriate for a situation of a large participant failure.

5.4 Suspension and security of supply issues

5.4.1 Description

A situation of financial distress in the NEM may coincide with physical supply problems. If, for example, the failing participant owns generation assets, its default may cause security of supply concerns.

In the case of a vertically integrated participant, a suspension from the NEM could cover both the retail and the generation sides of a business. The ROLR scheme does not provide a mechanism for maintaining the operation of the generation assets the business may also hold.

This raises the question whether it is possible under the NER to enable generation assets keep operating in the market while the company is under external administration.

In the case of market suspension, the NER require that the suspension notice specify the date and time from which a participant is suspended from trading, *and the extent of that suspension*.[63] Similarly, the NER stipulate that, from the time of suspension that AEMO includes in a suspension notice to a participant, the participant is ineligible to trade or enter into any transaction in the market *to the extent specified* in the notice.[64]

In addition, the following decisions may also need to be considered to secure physical supply:

- AEMO could decide to issue a direction on the generator to maintain or increase its power output;[65] and
- Under certain circumstances, state jurisdictions could apply 'emergency powers' to ensure supply of electricity, which could be called upon if other alternatives

62 For more detail, refer to chapter 7.

63 NER, clause 3.15.21(c).

64 Ibid, under (g).

65 Section 116 of the NEL and clause 4.8.9 of the NER provide AEMO with the power to 'do any act or thing' necessary to maintain or restore power system security and/or reliability. This may include requiring a registered participant to increase its power output.

have failed. AEMO and the jurisdictions have laid down principles for coordination in these situations.[66]

In extreme circumstances, AEMO may decide to suspend the spot market in a NEM region.

5.4.2 Stakeholder submissions

In its submissions to the stage one option paper and the first interim report, AEMO raised concerns about the implications of a retailer failing when it is part of a vertically integrated business.[67] AEMO noted that, if the entire business was suspended from the NEM by AEMO due to insolvency, then the generation arm would not be able to trade in the market. Thus, AEMO argued that there is a material risk that during the winding-up of a vertically integrated business, the NEM could be impacted by a reduction in supply, with consequential high prices and the risk of contagion.[68]

If the generation component of the business is not suspended, then the generator could keep operating while the business is insolvent, possibly under the management of an administration agent, and after breaking the inherent hedge the generation might have had with load in the business.[69] AEMO noted that there is, however, no guarantee the insolvency official would decide to continue to trade the generation capacity available.

AEMO suggested that any comprehensive contagion mitigation framework must deal explicitly with any generation that is being operated by the failing business.[70] The policy framework needs to balance the risks of having unhedged generation and potentially generation under administration continuing to operate against the risks of potential supply shortfalls in physical and financial markets.[71]

EnergyAustralia agreed that the rules give rise to some uncertainty as to whether a generator would be available to the market if it is part of a retail group that was suspended, or is itself in administration.[72] A number of participants have argued the rules should allow the continued participation in the market of a generator, while in administration.[73]

5.4.3 Commission considerations

In a situation of a failure of a large participant with significant generation assets, it may be desirable to facilitate the ongoing operation of the generation assets in the market, to help maintain security of supply.

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66 *NEM Memorandum of Understanding on the Use of Emergency Powers* and *NEM Emergency Protocol*, 24 November 1998.

67 Submission by AEMO to the stage one options paper, 20 March 2013, p1.

68 Submission by AEMO to the stage one options paper, 20 March 2013, p5.

69 Submission by AEMO to the stage one options paper, p3.

70 Ibid, p6.

71 Submission by AEMO to the first interim report, 12 July 2013, p1.

72 Submission by EnergyAustralia to the first interim report, 19 July 2014, p5.

73 See for example submissions to the stage two options paper by Alinta Energy, 18 December 2014, p2; EnergyAustralia, 19 December 2013, p2; GDF Suez, 19 November 2013, p5; InterGen, 19 December 2013, p3; Origin, 19 November 2013, p12.

Additionally, keeping the generation business operating could:

- be beneficial for alleviating problems for the ROLR(s) and avoiding further financial contagion, because:
  - suspending the generation business could lead to higher spot prices, enhancing the risk for the initially unhedged ROLR(s);
  - the unhedged ROLR inheriting additional load and the unhedged generator are natural contracting partners. Not suspending the generator would therefore make it easier for the ROLR to hedge again at short notice, reducing the risk of further contagion;
  - suspending the generator could create problems for OTC counterparties of the generator other than the internal retail business due to counterparty risk.
- provide the administrator of the failed retail arm with a revenue stream which could assist the administrator in meeting its obligations to the creditors of the failed retail business. This would then allow for a more orderly winding up of the insolvent retailer. Continued trading in the NEM could also be beneficial for selling off generation assets.

The NER are not clear on the scope for keeping generation assets operating in the market if the participant is under external administration.

The NER do not contemplate the default and suspension of a gentailer and, in particular, the subsequent decision by AEMO to suspend the business, or a portion of it, from participating in the NEM.

Part of the uncertainty regarding AEMO's powers concerns the relationship between the suspension and the prudential provisions contained in the NER. It is among the prudential provisions in the NER that a participant may not be under external administration.[74]

This clause may, therefore, not permit the ongoing operation of generation assets which are part of a registered entity that is under external administration, even if those assets would not have been suspended from the market by AEMO. In turn, this may compound system instability in these circumstances.

In chapter 9, we put forward proposed recommendations to clarify when a participant that is subject to administration could continue to operate in the NEM.

We also note that AEMO's power to direct a generator to increase its output in response to a situation of potential shortfall of supply may be of limited effect in situations where the failing participant has gone into external administration.

First, as outlined above, it is unclear under the current rules whether generation assets of a participant that is under external administration could keep operating in the market, even if not suspended by AEMO. This may mean it is uncertain how any output generated under a direction power could be settled in the settlement process.

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74 As defined in the Corporations Act or under a similar form of administration under any laws applicable to it in any jurisdiction. See NER, clause 3.3.1(b).

Second, even if the generator could remain operating in the market once under external administration, a direction by AEMO under the NEL to continue trading may conflict with the responsibilities and liabilities of an external administrator under the Corporations Act.

Under the Corporations Act, the administrator of the company under external administration could be personally liable for continued trading. Depending on the circumstances, the administrator therefore may choose to not accept the direction and/or decide to resign. AEMO's direction power may not be effective in that case. This may be different if the administrator decided the benefits of continuing operation would be likely to outweigh the costs, including potential liabilities.

If AEMO's direction powers are not effective, the market may have to rely on the emergency powers to continue supply of electricity. Depending on the circumstances, this could be an extreme response.

6 Responding to a large participant failure

Due to the size of their retail loads, the failure of some market participants could threaten financial system stability in the NEM. We refer to such participants as "systemically important market participants" (SIMPs).

We recommend the establishment of a separate framework to facilitate a timely, proportionate and suitable response to a SIMP experiencing some significant financial distress or failure. It would centre on an objective to maintain financial system stability in the NEM by minimising the impact of the failure of a SIMP on consumers and the market in accordance with the NEO/NERO. For other participants, the current arrangements, appropriately enhanced by our recommendations in this report, would apply.

The framework would gather to a single decision-making point all the decisions that would make up the response to a SIMP failure. Broadly, this would encompass the following:

- subject to certain conditions being met, whether to allow the SIMP time to rectify its financial situation. This would enable all viable market-based solutions for resolving the situation to be explored before any regulatory arrangements may have to be applied; and
- where the SIMP must be suspended from the market, a choice between applying the ROLR scheme, or an alternative arrangement.

Given the extreme nature of such a situation, decision-making is best held by a body that has overall responsibility for the market. Under the current NEM governance arrangements, government is best placed to make these decisions. It has responsibility for the market as a whole and can take into account the factors and considerations relevant to the circumstances.

Clear lines of accountability at a single decision-making point are required. Due to the national character of SIMPs, the Chair of the COAG Energy Council should be the ultimate decision-maker, in close cooperation with State and Territory energy ministers. The existing market and regulatory bodies would advise government on appropriate responses and relevant factors to consider.

The previous chapters explained:

- how the failure of some participants, because of the size of their retail customer load, could threaten financial system stability in the NEM; and
- that current arrangements would not be appropriate to manage and respond to such a failure, in particular because they do not permit all relevant issues to be considered, lack flexibility, do not provide a comprehensive and co-ordinated decision-making framework and are unclear as to how governments' interests would be taken into account.

For this review, we refer to these large participants, as "systemically important market participants" (SIMPs).

This chapter makes recommendations for establishing a new framework to manage and respond to a SIMP experiencing some significant financial distress or its failure. For participants not falling into this category, the current decision-making arrangements would continue to apply.[75]

The recommendations in this chapter are made at the principle level. To progress this proposal further, a number of significant implementation questions would need to be addressed. We have highlighted some of those questions in section 6.5.

6.1 Defining market participants as 'SIMPs'

Overview of draft recommendation

The Commission recommends that participants whose failure, because of the size of their retail loads, would cause significant and immediate financial disruption to the electricity market and would likely threaten financial system stability in the NEM, be classified as 'SIMPs'.

In this classification, the key criterion is whether the failure of the participant would put at risk the financial system stability of the NEM because of the retail customers that would have to be transferred under the ROLR scheme.

Over time, the criteria used to classify SIMPS should be reviewed, having regard to factors such as industry structure and regulatory changes.

Identification of SIMPs prior to a SIMP experiencing some significant financial distress or its failure occurring would enable the policy responses to be better designed and targeted in managing the risk of system instability in the NEM. It would enable the level of intervention in the market under the new arrangements to be proportionate to the risks.

We propose that classification of SIMPs would be done on the basis of the following:

- SIMPs would be defined as those participants whose failure, because of the size of their retail loads, would cause significant and immediate financial disruption to the electricity market and threaten financial system stability in the NEM.
- The main criterion to be used to identify a SIMP would be the size of the participant's retail load. This would refer to the number, consumption level and load profile of its retail customers that would have to be transferred to other participants in case of a failure.
- Other criteria would also be relevant. For example, ownership and the extent of operations across the NEM should also be taken into account.

The criteria for SIMP classification would need to be reviewed from time to time. Changes in areas such as industry structure or regulatory reforms may alter the types of participants that are systemically important. The criteria that we consider to be relevant in the current circumstances are described below.

75 To the extent that they are adopted, our proposed changes to the ROLR scheme and NER set out in chapters 8 and 9 would apply.

Overview of the criteria of systemic importance

1. Retail load

As explained in section 3.7, we consider that risks to financial system stability in the NEM would most likely materialise if the failure of a large participant triggers the need to transfer a large retail load under the ROLR scheme.

The extent of the retail activities of a participant is therefore a key factor in assessing systemic importance. The larger the share of the retail market of a participant, the more difficult it is for that share to be quickly absorbed by other participants in a timely manner without resulting in further failures.

This criterion would require looking at whether the application of the ROLR scheme would impose substantial financial liabilities upon the likely ROLR(s), which could put the ROLR(s) at risk of financial failure.

We would envisage that this assessment would be done on the basis of the liabilities accruing under a revised ROLR scheme that incorporates the changes recommended in chapter 8. The additional financial liabilities could also be assessed under a range of credible pricing scenarios.

2. Other factors

In addition to size, other factors may also be relevant in classification of participants as systemically important. Two additional factors might be:

- the extent of participation at a NEM-wide level: there could be some participants with substantial presence within one jurisdiction. The failure of such participants may not threaten financial system stability in the NEM, given the likely magnitude of the financial liabilities placed on other participants;[76]
- ownership: any participant that is State owned would not be captured by the definition of 'systemically important'. This is not because they could not be sufficiently large to give risk to systemic risks per se, but because Australian government ownership would generally be accompanied by a sufficient level of support to prevent the participant from failing.

More details about the proposed procedure for classifying SIMPs are included in section 6.3.4.

Participants have different corporate structures.[77] Such differences in corporate structures will also be reflected in different NEM registrations with AEMO for various activities. Therefore, there is a question of how the classification of SIMP should reflect the different ways businesses have organised their NEM activities.

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76 Participants with large share of generation capacity within one jurisdiction could pose a risk to system security. We note that there are existing emergency arrangements to deal with the physical supply risks of participant failure.

77 For example, retail and generation activities may be organised in different ways within the overall corporate structure (for example, within the same corporate entity or within separate corporate entities), and there may also be differences in how activities are organised for various NEM regions (for example, separate entities dealing with activities for different regions or activities across multiple regions organised within the same entity). Appendix E illustrates the corporate structures of the three largest vertically integrated market participants.

The assessment of whether a participant qualifies as a SIMP should take place on the basis of the totality of a participant's relevant NEM activities, regardless of how they are organised, structured or registered. This would remove any incentive to re-organise a corporate structure to escape SIMP classification.

6.2 SIMP failure response framework

Overview of draft recommendation

We recommend that a separate framework be established for responding to, and managing, a SIMP experiencing significant financial distress or its failure (collectively referred to as a SIMP failure).

The purpose of the proposed framework would be to facilitate a timely, proportionate and suitable response to a SIMP failure.

We recommend a separate decision-making framework be established for responding to, and managing, a SIMP failure.

The purpose of the proposed framework would be to facilitate a timely, proportionate and suitable response to a SIMP failure by:

- establishing a clear objective that would guide decision-making on the appropriate response to a SIMP failure;
- establishing clear and accountable decision-making at the appropriate level;
- enabling all relevant issues to be taken into account when responding to a SIMP failure, including the physical and financial stability of the NEM and wider considerations regarding, for example, consumer and investor confidence and competition impacts;
- facilitating and supporting coordination and cooperation between relevant organisations; and
- pooling all expertise and information necessary to enable a comprehensive assessment and make informed decisions.

6.2.1 SIMP failure response objective

Overview of draft recommendation

We recommend that decision-making in response to a SIMP failure be guided by a clear objective to maintain financial system stability in the NEM by minimising the impact of the failure of a SIMP on consumers and the market in accordance with the NEO/NERO.

Given the significant impacts of a SIMP failure on various aspects of the electricity market, we consider there needs to be clarity as to what the overriding objective would be when responding to, and managing, a SIMP failure.

We propose that this guiding objective should be to maintain financial system stability in the NEM by minimising the impact of the failure of a SIMP on consumers and the market in accordance with the NEO/NERO (SIMP response objective).

The focus would be on the stability of the market as a whole; the objective is not to prevent an individual participant from failing or leaving the market. The references to the NEO/NERO are consistent with decision-making under the NEL and NERL, and also enable longer term considerations, such as the need for an ongoing, sustainable market, to be taken into account.

Such an objective would require consideration of a number of factors including:

- the continuity of retail supply to customers served by the failed SIMP under reasonable terms and conditions, including the activities needed to support retail supply;
- the impact of the failure on other participants and how that impact might be minimised;
- the need for non-viable businesses to exit the market in an orderly manner;
- efficient allocation of risks to those parties best able to manage them;
- market disciplines and incentives, so that there is not an undue reliance on, or expectation of, government support;
- consumer and investor confidence; and
- the impact on competition in the NEM.

6.2.2 Single point decision-making

Overview of draft recommendation

We recommend that all of the decisions on the management of, and response to, a SIMP failure be gathered to, and made at, a single decision-making point. To facilitate this, decisions regarding suspension and revocation of retail authorisations that are currently taken by AEMO and the AER would also be made at that single decision point.

Managing and responding to a SIMP failure in a way that best meets the SIMP response objective would involve a number of decisions. Broadly, this would encompass the following:

- first, if the SIMP is experiencing some form of financial distress, to decide whether to allow the SIMP more time to rectify its situation and explore viable market-based solutions for resolving the situation, before any regulatory arrangements may have to be applied. This opportunity should only be explored as long as a SIMP is still able to meet its financial obligations;
- if it is clear that the SIMP can no longer meet its financial obligations, and a market-based solution to the problem is not viable, a decision needs to be made on whether to apply the ROLR scheme or an alternative arrangement.

Under current arrangements, this would involve a number of different decisions to be made by different bodies applying varying criteria. To address the concerns raised above about the potential for inconsistency, we recommend that these decisions be made at a single decision-making point.

This would include decisions regarding default and suspension made by the AEMO, and decisions regarding revoking of retail authorisations and ROLR notices made by the AER under the NEL/NER and NERL/NERR.

Where these decisions are made under state laws, the current jurisdictional decision-makers would continue to make these decisions. Similarly, ASIC would remain responsible for the decision whether nor not to cancel a SIMP's AFSL licence.

We also recommend that decisions to classify participants as 'SIMP' should be made at the same single decision-making point.

6.2.3 Decision-making at the appropriate level

Overview of draft recommendation

We recommend that all of the decisions on the management of, and response to, a SIMP failure be made at the government level.

Within government, there needs to be a single decision-maker, for accountability and transparency. The Chair of the COAG Energy Council, the federal minister with portfolio responsibility for energy, could be responsible for making such decisions. These decisions would be made in close cooperation with jurisdictional energy ministers.

Given the extreme nature of a SIMP failure, decision-making is best held by a body that has overall responsibility for the market. Under the current NEM governance arrangements, government best fits that description. It has responsibility for the market as a whole and can take into account the factors and considerations relevant to the circumstances. More specifically:

- Financial system stability considerations are broad and complex. The decisions would also be national in dimension. Governments would be in a better position to consider all these issues compared to market bodies.
- The circumstances of a SIMP failure are likely to be unique in each situation. This means that the resolution of a SIMP failure could not occur on the basis of a pre-defined 'formula'. Governments would be best placed to exercise judgement in each case, particularly within the short timeframe that is likely to be required.
- The decisions would also be politically and commercially sensitive and have substantial implications for consumers and participants other than the failed participant. There is a clear role for government in responding to broader consumer and market concerns and maintaining confidence.

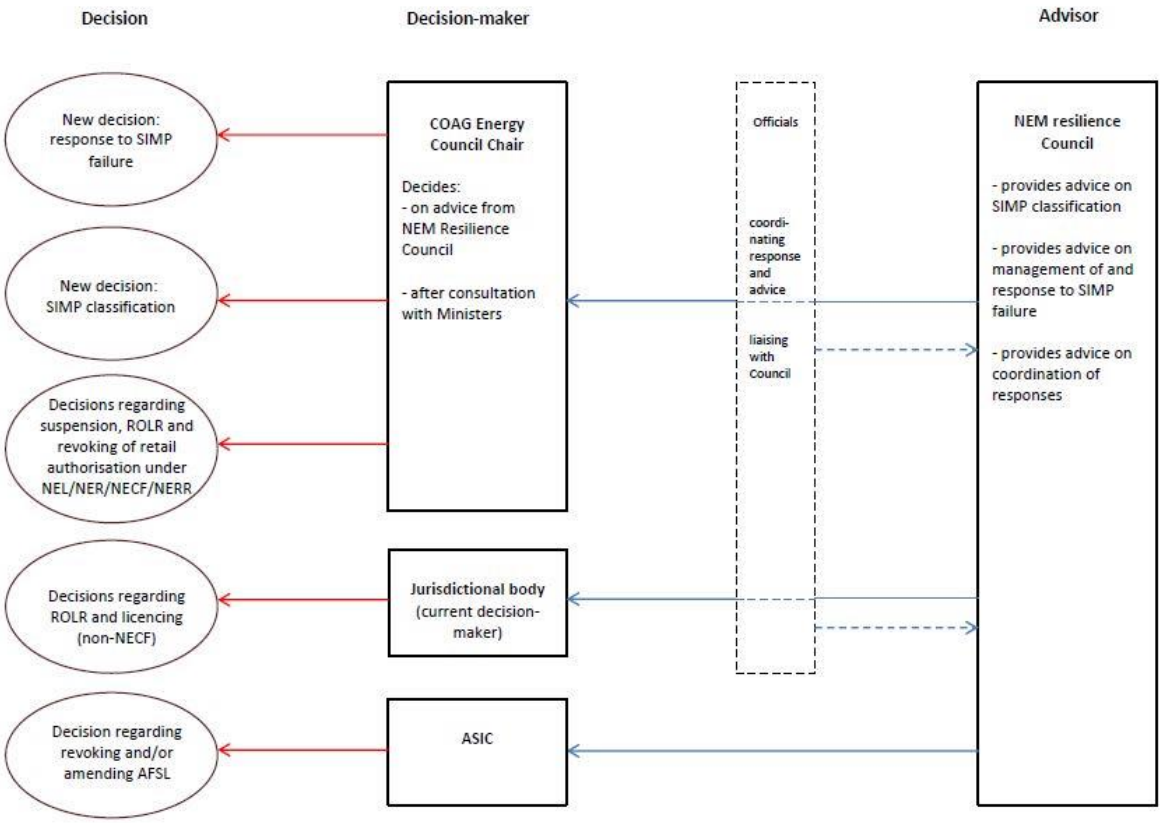
Within this decision-making framework, there ultimately needs to be a single decision-maker, to establish clear accountability, and for transparency. We consider that the Chair of the COAG Energy Council, the federal minister with portfolio

responsibility for energy, could ultimately be responsible for making such decisions, given the national nature of a SIMP's business operations.

The Minister would cooperate closely with the state energy ministers of the jurisdictions that are affected by the SIMP failure when applying the decisions and also to coordinate responses across the jurisdictions.

Decision-making in the SIMP failure response framework can be illustrated by the diagram in figure 6.1.

Figure 6.1 Decision-making in the event of a SIMP failure



6.2.4 Advice and coordination - the role of the NEM Resilience Council

Overview of draft recommendation

To assist government decision-making, we recommend that relevant market bodies provide advice in a collective and coordinated way, through a 'NEM Resilience Council'.

The Council would:

- assess and advise government on which participants meet the classification of a 'SIMP';
- escalate instances where a SIMP may be imminently facing financial distress and prepare advice for government when it becomes aware of such circumstances;
- advise on the best course of action where a SIMP has failed; and
- consider potential risks to financial market stability in the NEM on an ongoing basis.

At the time of a SIMP failure, it would be critical that decision-making is swift, but also well-informed. To assist government make the decisions that best meet the SIMP response objective, we recommend that the relevant market bodies provide advice in a collective and coordinated way, through a 'NEM Resilience Council'.

The NEM Resilience Council would help government to be as well prepared as possible. This includes assisting government:

- to be fully informed of all the considerations - both energy and financial - associated with a SIMP failure;
- by providing the appropriate expertise; and
- by providing a point of contact from which to seek further information.

The Council would:

- coordinate advice to government on the best course(s) of action in the event of a SIMP failure consistent with the SIMP response objective, and any other advice as required at the time; and
- consider potential risks to financial system stability in the NEM on an ongoing basis.

It would also advise government on which participants should be defined as 'SIMP'.

The membership of the NEM Resilience Council would consist of existing market bodies that need to be directly involved in the event of a SIMP failure:

- AEMO;
- AER;
- AEMC; and
- ASIC.

The Council would:

- bring together the expertise and information resources of these organisations that are needed to provide government (including jurisdictional governments and decision makers where relevant) with the best advice. Inclusion of these bodies within the Council would also improve the quality and coordination of decision-making. The Council could also consult other relevant bodies such as the Australian Competition and Consumer Commission, AFMA and the ASX. In addition, it could engage the assistance of experts in the fields of business, banking, insolvency, finance or other areas; and
- be expected to consult and cooperate with relevant state agencies where necessary, for example to facilitate or complement existing ROLR and energy security response mechanisms

One or more of the existing member bodies of the Council could establish a secretariat to provide the Council with the necessary administrative support.

The Council members would need to have the mandate to perform the functions contemplated here, and share information to which each of them currently has access under their existing provisions for that purpose. To provide clarity and certainty on these issues, we consider that there would be merit in anchoring the functions of the Council and its members in relevant legislation.

The proposed functions of the NEM Resilience Council bear some resemblance to those of the Council of Financial Regulators, which is the high-level forum for cooperation and collaboration among Australia's main financial regulatory agencies (APRA, ASIC, the RBA) and the Treasury. The role of the Council of Financial Regulators is to contribute to the efficiency and effectiveness of financial regulation and to promote stability of the Australian financial system. This is achieved by the members sharing information and views on financial sector conditions and risks, discussing regulatory reforms and, if the need arises, coordinating responses to potential threats to financial stability.[78]

To advise on SIMP failure response

Elements of the Council's advice could include:

- the Council's considerations as to whether and how the transfer of customers could take place under the ROLR regime without a risk of further cascading failures;
- implications for other participants;
- implications for the financial sector and its funding of the energy sector;
- the appropriate approach for any generation assets the SIMP may hold;
- the Council's considerations regarding whether the SIMP should be suspended from the market or whether (parts of) a SIMP's activities could remain operating in the market. Also relevant here would be the Council's views on whether other licences/authorisations should be revoked; and

78 See the website of the Council of Financial Regulators: www.cfr.gov.au.

- proposals for maintaining consumer confidence, and information campaigns, in a way that is nationally consistent and coordinated.

The Council's advice could contain options for managing the SIMP failure, with relevant cost/benefit analysis for each of these options.

Government would be required to take the Council's advice into account when deciding on the appropriate response to a SIMP failure.

An example of how the SIMP failure framework and the NEM Resilience Council's functions could work in practice, is discussed in section 6.3.

To consider potential risks to financial system stability in the NEM on an ongoing basis

We consider there could be merit in a function for the NEM Resilience Council to monitor and consider potential risks to financial system stability in the NEM on an ongoing basis.

A good understanding about risks to financial system stability in the NEM would enable the Council to build up knowledge and expertise, and be better prepared to advice government when a SIMP failure occurs. The Council could decide that it should meet on a regular basis to discuss issues and trends in the energy market that are relevant from the perspective of financial system stability in the NEM.

The Council would advise government on necessary refinement of the framework for responding to a SIMP failure, including the appropriate response tools, if developments in the market would make such adjustments necessary.

Where possible and appropriate, the Council could draw on existing work undertaken by, and information available to, the Council's members. We are not proposing to establish separate information obligations on participants for this purpose, but rather to build on already existing arrangements and expertise within the market bodies.

To assess and advise on which market participants should be defined as 'SIMP'

As mentioned in section 6.1, those participants which can be categorised as 'systemically important' would need to be classified as such. The NEM Resilience Council would provide its advice on which participants should be classified as 'SIMPs' to government, who would make the decision.

SIMP classification would take place on the basis of the criteria outlined in section 6.1, as adjusted from time to time.

SIMP classification would need to be done on a periodic basis, as participants change over time, for example as a result of mergers and acquisitions. We suggest that this classification be undertaken every two years, or following a major restructure of an existing SIMP.

The Council would conduct its assessment on the basis of publicly available information and information already available to members of the Council.

The Council would have no powers to compel the provision of information. Participants would not be required to provide information. The NEM Resilience Council would inform those participants which it proposes to recommend to government to be classified as 'SIMPs', and provide an opportunity for those

participants to provide their views in response. Those participants could also make a submission on the proposal to government if they believed their SIMP classification was not appropriate. At any point, whether to the NEM Resilience Council or directly to government, participants could provide confidential information to challenge that proposal.

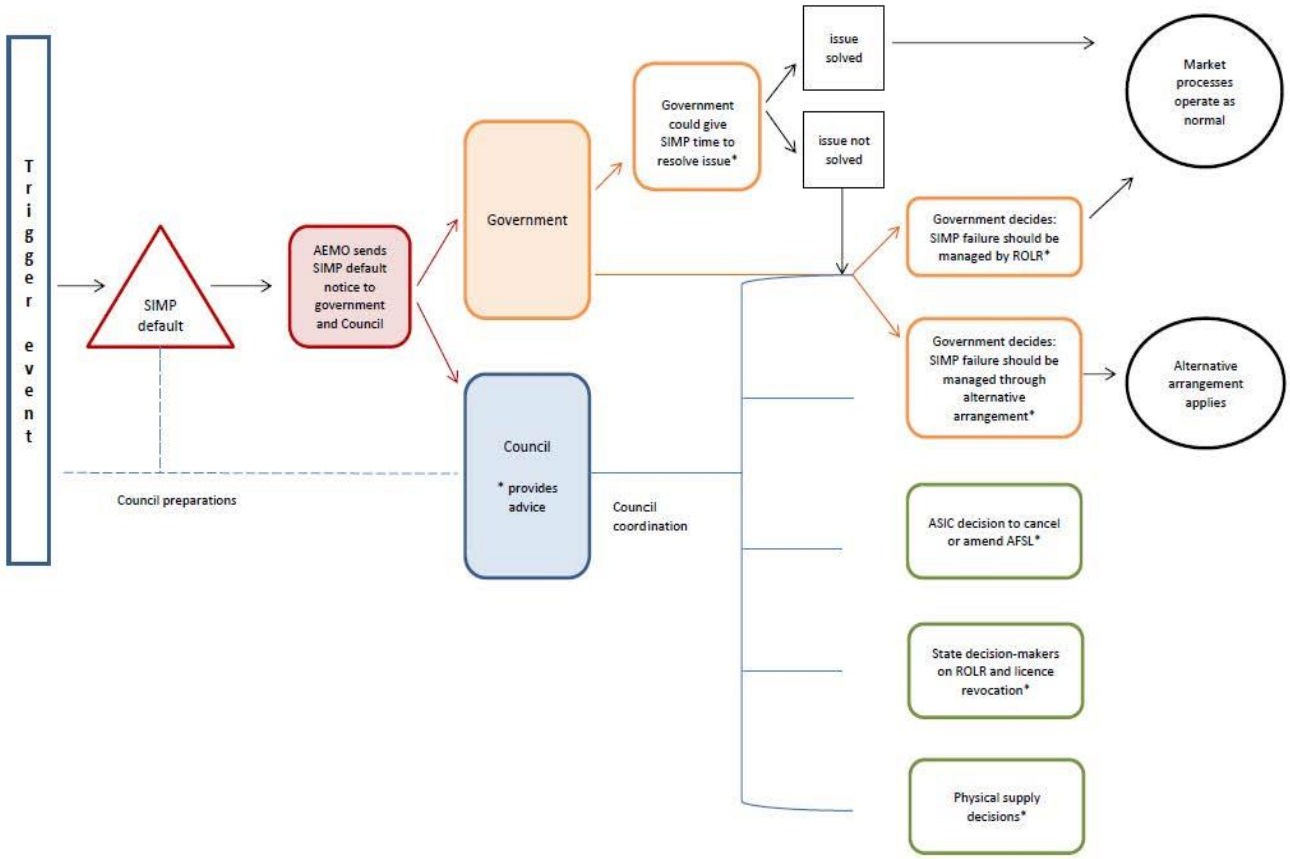
The Council would also advise government on whether there is a need to adjust the criteria for SIMP classification, as a result of changes in the market structure over time.

6.3 The SIMP failure response framework in practice

This section describes, at a high level, how the SIMP failure response framework could apply. It assumes a likely course of action for a SIMP failure, commencing with a default by the participant under the NER. In this example, the trigger event for the SIMP decision making framework is an event which could lead to a default notice being issued in the spot market.

Schematically, it can be illustrated as follows:

Figure 6.2 SIMP failure response framework



6.3.1 Decision on SIMP default and the appropriate way of managing a SIMP's failure

In the proposed framework, the decisions on the management of, and response to, a SIMP failure are made at the government level, including decisions regarding suspension and revocation of retail authorisations that are currently taken by AEMO and the AER.

There needs to be a clear point at which responsibility for making these decisions is shifted from the energy market bodies to government. To facilitate this, relevant market bodies would need to inform government when an event or circumstance occurs that would trigger the need for such a decision.

The point in time at which AEMO would normally issue a default notice under standard NER processes could be the point in time where decision-making responsibility shifts to government.

Under this proposal, instead of issuing a 'standard' default notice when a default event occurs in respect of a SIMP, AEMO would issue a 'SIMP default notice' to government in respect of the SIMP. The NEM Resilience Council and the SIMP would be advised of this. Like the default notice under standard NER processes, the 'SIMP default notice' would not be publicly released.

Upon receipt of the 'SIMP default notice', government would then become formally responsible for deciding on the appropriate next steps, including for the decision whether or not to suspend the SIMP from the market. The issuing of a 'SIMP default notice' would also formally trigger the process for the NEM Resilience Council to develop advice to government.

A similar mechanism could also be designed for the AER's decision on whether or not to revoke a SIMP's retailer authorisation. Further work is needed to develop appropriate mechanisms for transferring responsibility for decision-making from energy market bodies to government in the event of a SIMP failure.

Time provided to the SIMP to remedy the default

Once it has received a 'SIMP default notice' from AEMO, depending on the circumstances, government could decide that the participant should be granted some time in order to find a solution to the situation. This would enable all viable market-based solutions to be explored before any regulatory arrangements may have to be considered.

For example, the failing SIMP may be close to finalising a corporate restructuring in response the situation. Awaiting that outcome may meet the SIMP response objective and avoid more extreme options for responding to the situation.

In deciding whether to grant the failing SIMP some additional time to find a solution to the situation, factors to be considered would include:

- the nature of the problem that caused the default event;
- whether the SIMP was still solvent and able to meet its financial obligations;
- the complexity of the SIMP, including the organisational structure;
- whether there was still clear and accountable decision-making within the SIMP;

- the prospective of private funding and corporate restructuring of the SIMP;
- whether the SIMP has a recovery plan in place, and the time realistically required to enact activities under such a plan; and
- the risks to the market, such as a potential payment shortfall to generators.

To reduce uncertainty and confusion in the market, and to minimise risks more generally, we consider that the time provided to the SIMP to explore options to resolve the crisis be kept as short as possible. A maximum timeframe could be included in the framework.

We note that the current NEM prudential framework covers a 7 day-period in addition to the regular 28-day settlement period. This 7-day period is meant to shield AEMO from liabilities that are being accrued by the failing participant in the time it would take AEMO to suspend it from trading in the market following a default event. This may include some response time for the failing participant to remedy the default.

The current prudential framework may not provide sufficient collateral to cover an extended period. One way of funding this additional time, and minimising the risks to the wholesale market, could be to require SIMPs to provide additional credit support to AEMO.

If the SIMP is able to solve the default, no further action may be required and the SIMP could revert back to current market processes. If not, government would then be required to make a decision on the response to the SIMP failure, having regard to the SIMP response objective.

Deciding on how the SIMP failure should be managed

In developing its advice to government on the response to the SIMP failure, the NEM Resilience Council could make an assessment of whether the normal NEM arrangements, which would mainly be the ROLR scheme, could work in the circumstances, and the impacts of those arrangements.

This means the Council would assess whether application of the ROLR scheme could take place without giving rise to a risk of financial contagion. It would also assess whether another stability arrangement would be preferable. For more discussion on the alternatives, refer to chapter 7.

6.3.2 Other decisions

Where a SIMP enters the initial stages of financial distress, causing it to breach obligations under rules or other instruments, a number of decisions may be considered by various organisations in order to send a 'warning signal' to the SIMP and/or the market.

This category of decisions would include:

- the issuing of a call notice by AEMO;[79]
- a request by ASIC to the SIMP to remedy the breach of an AFSL; and

79 This would also include AEMO's power to make claim upon any credit support held in respect of the obligations of the market participant for the amount of money the participants owes AEMO.

- a request by the AER or a state regulator to remedy the breach of a retailer authorisation or licence.

These types of decisions would not result in the SIMP being suspended from the market. Instead, they are meant to provide the SIMP with the opportunity to take actions so that the breach or default might be remedied within a certain timeframe.

We do not propose to change the decision-maker for these types of decisions. We would envisage that the market bodies responsible for making such decisions on the NEM Resilience Council would brief other members on the situation and considerations. The Council would also keep government informed on these matters.

6.3.3 Preparation by the NEM Resilience Council

Overview of draft recommendation

We recommend that an 'early warning mechanism' be established, to trigger the need and justification for the NEM Resilience Council to commence preparing advice to government, should it be required.

In providing its advice to government on the appropriate response to a SIMP failure, the NEM Resilience Council would need to consider a wide range of complex issues within a relatively short timeframe. The discussion above also contemplates the provision of advice in the event that a SIMP experiences some financial distress, prior to its failure.

To do this effectively, the Council should commence preparations when it becomes aware of a circumstance or matter raising concerns about a SIMP's ability to meet its financial obligations. A solid early-stage preparation would allow the NEM Resilience Council to assess properly all relevant aspects and consider all potential options for a high-quality response in a timely manner.

The importance of a preparation stage was recognised in the recently released report of the Financial System Inquiry.[80]

> "Many crisis management options are only credible with significant pre-planning. In a crisis, the more options available, the more likely a credible, low-cost option to prevent a disorderly collapse can be found that does not involve putting taxpayer funds at risk. Pre-planning can also increase the consistency of Government approaches to crises and, through public communication, can increase the predictability and transparency of Government responses."

It would be appropriate to establish an 'early warning mechanism'. Certain 'risk events' in respect of a SIMP could trigger government involvement. The extent of the Council's activities in this phase would depend on the severity of the trigger itself.

80 The Financial System Inquiry (Murray) - *Interim Report*, 15 July 2014, p3-14.

Such circumstances or matters should be objective in nature and could include:

- a credit downgrade;
- breach of a debt covenant;
- a breach of an AFSL that triggers an ASIC- notification requirement, breach of a financial obligation that triggers an ASX-notification requirement; and
- a breach of any financial obligations under energy laws with respect to the payment of money or otherwise of a financial nature, including a breach of any financial obligation included in a retailer authorisation or generation licence.

Further work would be needed to identify appropriate and observable 'triggers', and we appreciate any stakeholder views on this issue.

SIMPs would be required to notify to the NEM Resilience Council of the occurrence of such a trigger. The notification could be achieved by building on already existing requirements for retailers under the NERL, summarised in box 6.1.

Box 6.1: Notification requirement retailers

The NERL provides that retailers are required to notify the AER and AEMO of any event, circumstance or matter of which the retailer is aware and which -

- (a) it has reason to believe -
  - (i) might be, is or may be at some time in the future an event, circumstance or matter that may or will affect; or
  - (ii) gives rise to some risk of affecting

  a retailer's ability to maintain continuity of the sale of energy to its customers; or
- (b) gives rise to a ROLR event in relation to the retailer.[81]

If the AER receives notice of or otherwise becomes aware of any event, circumstance or matter that it has reason to believe may or will affect, or give rise to some risk of affecting, continuity of the sale of energy to a retailer's customers, the AER may request financial information from the retailer, including (but not limited to) any of the following:

- details of any parent company guarantees;
- details of cash flow;
- details of amounts owing to distributors; and
- details of the retailer's current financial position together with the most recent financial statements of the retailer.[82]

81 NERL, section 150.

82 NERL, section 130 (1) and (4).

The Council's activities in this phase would be aimed at collecting relevant information necessary and available to the members to prepare adequate advice to government, should the situation demand it.

SIMPs may choose to provide information to assist the NEM Resilience Council. We do not propose to provide the Council with new information gathering powers. Instead, in performing its tasks, the Council would build on already existing information gathering powers of its members.[83]

6.4 Implementation and further work

The previous sections have outlined, at a high level, our proposed framework for managing a SIMP failure.

If the framework was to be adopted, a number of implementation questions would need to be addressed. These include:

- the detailed methodology for applying the criteria for SIMP classification;
- if and how a government decision on SIMP classification could be challenged;
- how the objective that applies in the event of a SIMP failure could best be included in relevant legislation, including implications for the Corporations Act;
- how decisions by government on the appropriate response to a SIMP failure are made, if and how they are made public; if and how they could be challenged before a court;
- how transfer of responsibility for decision-making in the event of a SIMP failure from energy market bodies to government could best be implemented;
- how decisions are made within the Council; the status of those decisions and the Council advice;
- how information gathered by individual Council members could be shared with other members, including confidentiality aspects;
- the role and functions of the Council secretariat;
- how observable triggers for the Council to start preparing its advice could be established; and
- given the nature of the decisions and functions involved, the location for these provisions; that is, whether rules or law.

Our proposals in this chapter for a new framework for decision-making to manage a SIMP failure have been designed for the NEM, consistent with the scope of the COAG request for advice. Should the proposed framework be adopted, it could be considered if and to what extent the proposed framework should also apply to gas retail activities undertaken by SIMPs, given the fact that a number of participants are also active in gas retail markets.

If a SIMP failure coincides with, or leads to, physical supply problems, decisions may need to be made to secure a continuous supply of electricity. For example, AEMO may

83 For an example refer to box 6.1.

need to issue a direction to a generator. We do not propose to change the decision-maker for these types of decisions in the situation of a SIMP failure. In implementing the SIMP failure response framework, it would be necessary to streamline the two sets of decisions.

6.5 Assessment against the national electricity objective

The failure of a SIMP in the NEM would be disruptive for both the spot market as well as the financial contract markets underpinning it. The response to a SIMP failure would require consideration of a wide range of factors, including some outside the energy market. Various governments and market bodies would need to be involved to develop the response that is most appropriate under the circumstances.

We consider that the proposed framework would address the gaps in current arrangements by:

- consolidating decision-making at a single point, and raising it to the government level, with appropriate support being provided; and
- incorporating into the framework new decisions to be made, namely on the best approach to manage and respond to a SIMP failure and on identification of those participants which are of systemic importance; and
- bringing together the necessary information and expertise.

Our proposal contains an approach for how this could be organised and formalised in practice, providing mechanisms for coordination and cooperation between government and market bodies, while providing for flexibility to deal with different situations.

The framework would promote coherent and comprehensive outcomes. It would also facilitate a timely response. Given the significant interests of both private and public sector stakeholders in the event of a SIMP failure, we consider this framework is proportionate to such a situation.

We consider that the proposed framework would contribute to a more effective operation of market arrangements in situations of a SIMP failure, leading to an overall better outcome for electricity consumers and the market as a whole.

For the reasons mentioned above, we consider the proposed framework would meet the NEO.

6.6 Consultation questions

The Commission is interested to receive stakeholder views on the following consultation questions.

Question 1 Responding to a financial crisis in the NEM

1.1 Do you agree with the Commission's view that a separate framework is required for responding to such a situation? What is your view on the proposed framework, including the roles and functions of government and the NEM Resilience Council?

1.2 Section 6.4.1 discussed the possibility of allowing, under certain circumstances, a SIMP some time to remedy the default. The period of time may not be covered by current AEMO prudentials. How, in your view, could this additional time be funded? For example, should SIMPs be subject to additional prudential requirements?

1.3 Which events and circumstances do you think would be appropriate triggers to initiate the consideration of the NEM Resilience Council?

7 Stability arrangements

In the absence of a plan for how to manage and respond to a SIMP failure, there is likely to be pressure on the stability of the system and a potential expectation for government to intervene. The absence of a considered plan for intervention could lead to more chaotic, unplanned intervention if a crisis occurs, which may be more costly and less effective.

In the event of a retail participant failure, external administration under Australian law cannot be relied upon to ensure an outcome consistent with policy objectives to provide continuity of supply to customers, and to maintain financial system stability in the NEM. The ROLR scheme seeks to address this concern.

Even taking into account our recommendations to improve its effectiveness and operation, the ROLR scheme may not be effective in all situations.

For this reason, there is merit in developing an alternative - which we have termed stability arrangements - which could apply when a SIMP fails. They would involve a form of special external administration or management.[84]

The detailed design and implementation of stability arrangements would be a complex exercise. It would involve a range of stakeholders, both within and outside the electricity sector, a package of legislative changes, and the potential for significant interim funding requirements.

We recommend that the COAG Energy Council commission energy departments, in consultation with Commonwealth, State and Territory Treasuries, to form a working group to develop the detailed design of stability arrangements for the NEM, incorporating a form of special external administration. A draft scope of work is provided in appendix H.

There is merit in developing and implementing an alternative - which we have termed stability arrangements - which may apply when a SIMP fails. Stability arrangements would be an alternative to the ROLR scheme and external administration laws.

There is a challenge in designing stability arrangements that maintain commercial incentives on SIMPs, their creditors and shareholders, while providing a framework to minimise the risk that the failure of a SIMP results in widespread impacts on NEM participants and customers. This chapter provides a broad framework for developing such stability arrangements, but does not prescribe a detailed design. It highlights the potential shortcomings of current arrangements in dealing with the failure of a SIMP, and the main issues that arise in developing stability arrangements.

84 The first interim report proposed a special administration regime. This was a specific form of special external administration. We have used the term 'stability arrangements' as a generic term for special external administration, to avoid confusion. The design of the stability arrangements may not be the same as the special administration regime proposed in the first interim report.

7.1 Shortcomings of the current arrangements

Chapter 5 sets out a number of shortcomings of the current arrangements to manage and respond to a SIMP failure. They include the fact that currently there are not enough options available to manage and respond to such a situation.

7.2 Developing alternative measures to respond to a SIMP failure

Given the potential shortcomings of the current arrangements where a SIMP fails, we are of the view that alternative measures are needed. Part of the package of alternatives includes amending the NER to permit generators to remain in the market where they are subject to external administration in some circumstances. Alternatively, it may mean amending the way in which insolvency laws apply to SIMPs.

Such changes should not be made lightly, given that they would likely change the way in which risks are allocated among different parties. However, where there are over-riding policy objectives that would not be met if conventional approaches are adopted, there is an argument for introducing alternative stability arrangements. In the NEM, these policy objectives include the continuity of supply to customers and the maintenance of stability in the market.

There are precedents for establishing special forms of external administration in other sectors in Australia, as well as overseas jurisdictions, as discussed below.

7.2.1 Precedents for special external administration

In advice to the Commission, Allens note that "there are precedents for establishing specific forms of external administration to address particular industries or important State interests to deal with situations that are not able to be satisfactorily dealt with by traditional forms of external administration."[85] These precedents include:

- a judicial management regime for the Australian general insurance sector. Under this regime "an external party is inserted by the court to take control of the insurer, investigate its state of affairs and determine what course of action would best serve the interests of policyholders and the stability of the financial system in Australia."[86]
- the special administration regime for energy supply companies in the United Kingdom. This regime has an objective of ensuring that the supply of gas and electricity to customers is continued until the distressed company is either rescued as a going concern or, if this is not possible, its business is able to be transferred to one or more other companies.[87]
- a "Single Point of Entry Strategy" developed in the United States to address the potential failure of a bank holding company or other financial company, which "allows for normal liquidation arrangements to be avoided under specific

85 Allens, *Dealing with financial distress in the national electricity market, special administration scheme for electricity retailers*, 10 May 2013, p2.

86 *Ibid*, p77.

87 Further detail of this scheme is contained in AEMC, Options paper, NEM financial market resilience, 9 November 2012.

circumstances", in other words "when the failure of the financial company and its resolution under the Bankruptcy Code or otherwise applicable federal or state law would have serious adverse effects on financial stability in the United States".[88]

- a special administration regime introduced in the United Kingdom banking sector.

These precedents demonstrate that policymakers in both Australia and overseas have introduced special arrangements in some sectors, if a business is insolvent (or is likely to become insolvent), and normal insolvency procedures carry a risk that the interests of customers (or policyholders or depositors) will not be met, and/or they would lead to widespread financial instability.

7.2.2 Special administration regime

The first interim report recommended the development of a special administration regime (SAR) as an alternative to the ROLR where a large retailer fails. The SAR was a specific form of special external administration. Its objectives were to provide for continuity of electricity supply and the orderly transfer of customers to other retailers, while mitigating the risk of financial contagion. As discussed further below, the Commission's analysis during the second stage of the review has identified additional objectives and considerations for stability arrangements in the NEM.

Box 7.1: Special administration regime (SAR)

The SAR was proposed in the first interim report as an alternative to the ROLR scheme for large retailers in the NEM. It would involve a special administrator being appointed over the retailer, with the primary objective of maintaining security of supply to customers, and allowing an orderly transfer of customers to another retailer (or retailers).

Under the SAR as proposed in the first interim report, interim government funding would enable the administrator to ensure continued electricity supply and continued payments for energy purchases. The administrator would seek to sell the retailer's customer contracts to other retailers, with a back-up mechanism to allocate any unsold contracts. Government funding would be recovered from this sale, with any short-fall recovered through a cost recovery arrangement.

The SAR would impose some up-front costs. In particular, the first interim report suggested it would be most effective if there was ring-fencing of all retailers' NEM electricity retail operations into a separate corporate entity.

Implementing the SAR would require a package of new legislation and legislative changes.

88 www.gpo.gov/fdsys/pkg/FR-2013-12-18/pdf/2013-30057.pdf, page 76615

7.2.3 Submissions from stakeholders

The proposal to introduce a SAR was supported by some stakeholders but strongly opposed by others. Stakeholders' views relate to two broad issues:

1. whether there is a need or justification for an alternative to current arrangements, ie, the ROLR scheme and normal insolvency processes, to effectively manage the failure of large retailers; and
2. if additional arrangements are justified, whether the specific design of the SAR is appropriate.

Is there a need for an alternative to the ROLR scheme to manage the failure of a large retailer?

Submissions supporting the development of an alternative to the ROLR to manage the failure of a large retailer were received from the AER, AEMO, the Energy Networks Association (ENA) and the NSW DNSPs.[89]

The AER suggested that "addressing large retailer failures through the ROLR arrangements creates a significant risk of cascading failure and would result in unacceptably high market concentration, as the majority of customers are likely to be transferred to the remaining large retailers. Large retailer failures need to be addressed outside the ROLR regime".[90]

The NSW DNSPs supported the AEMC's view that there is merit in establishing a special administration regime and noted that "whilst acknowledging the inherent complexity and difficulty involved in establishing such a regime, we consider this would be an effective measure for mitigating both flow-on impacts to other participants and also the risk of cascading retailer failure."[91]

The ENA also supported the option of a special administration regime "in the circumstances that the AER and the Minister consider that reference to the ROLR scheme would be inadequate to manage contagion risk".[92]

Submissions from other market participants did not support the introduction of the SAR. The ESAA, for example, suggested "the problems associated with a large retailer failure are due to regulatory failure; the design of the retailer of last resort (ROLR) scheme and retail price regulation, not business practices. As such, any solution should be directed at addressing the regulatory problems, rather than imposing additional costs on businesses."[93]

Several industry submissions suggested that the costs of the SAR were significant and out of proportion with the probability of one of the large retailers failing. They also voiced concern about the interaction of the SAR with insolvency law, and the impact on creditors' rights.

89 Submissions to the first interim report are summarised in appendix B.

90 Submission by the AER to first interim report, p1.

91 Submission by the NSW DNSPs to the first interim report, 15 July 2013, p1.

92 Submission by the ENA to the first interim report, 12 July 2013, p3.

93 Submission by the ESAA to the first interim report, 12 July 2013, p1.

The design of the SAR

Some stakeholders raised significant concerns about design features of the SAR as proposed in the first interim report. The ESAA, for example, suggested that "the proposed special administration regime is highly intrusive, complex, and would require changes to nearly every aspect of running an energy business".[94]

The concerns raised by stakeholders included:

- the up-front costs and implications of ring-fencing retail activities;
- the proposed prohibition on counterparties with contracts with the failed retailer to exercise rights of termination due solely to the appointment of the special administrator; and
- the potential cost to government of financing the SAR over an interim period; and how the costs of the SAR would be recovered.

Where relevant these concerns are discussed in the later sections of this chapter. However, we have not responded to each issue in depth, because the aim of this chapter is to raise relevant issues in designing stability arrangements, not to recommend a detailed design. We note that the design of the SAR flowed from the objectives it was intended to meet, and that identifying the objectives of the stability arrangements is fundamental to developing the appropriate design.

7.2.4 Commission considerations and conclusions

While making a number of arguments against the SAR model, stakeholders have not put forward substantive reasons as to why additional arrangements are not necessary, apart from stating that the risk of failure is low.

If a SIMP failed today, the ROLR scheme would apply together with normal external administration procedures. For the reasons set out in chapter 5, we are of the view that this would not be adequate. In the absence of a plan for how to respond to the collapse of a SIMP, there is likely to be pressure on governments to intervene so that the initial failure of one large market participant does not lead to widespread cascading failure and instability in the NEM.

The absence of a considered plan for intervention could lead to more chaotic, unplanned intervention if a crisis occurs, which may be more costly and less effective. The failure of a SIMP in this environment could lead to uncertainty and a loss of confidence in the market, which is likely to exacerbate market instability.

While it would be possible to leave questions of government involvement until an event actually occurred, there is benefit in having a plan or procedure in place, to:

- provide greater confidence in the stability of the NEM, in terms of both physical supply and the financial market underlying the NEM;
- reduce the likely cost to government (and ultimately taxpayers) from intervening with no pre-planning at a time of crisis; and

94 Ibid, p5.

- reduce uncertainty about how the government, regulators and AEMO would respond if an extreme event occurs and clarify how risks are shared by various stakeholders.

Reforms in the finance sector following the GFC have demonstrated a variety of potential approaches to address the issues that arise where a systemically-important business experiences financial distress or fails. Furthermore, there is merit in having a 'toolkit' approach to provide flexibility to respond to the specific circumstances of different events.

As discussed in chapters 10 and 11, we are not recommending the introduction of any 'preventative' measures at this stage. Reforms to make the NEM more resilient should, at this stage, be targeted to improving how the market arrangements manage and respond to a SIMP failure. As part of such reforms, we are of the view that further detailed work should be undertaken to develop and implement stability arrangements.

We acknowledge that the specific design of the SAR may not be the most suitable form of stability arrangement for the NEM. Our own analysis, as well as input from stakeholders, have raised a number of issues for further consideration in the design of an alternative to the ROLR.

In particular, further consideration needs to be given to the implications of vertical integration for the design of an alternative to the ROLR for SIMPs. When the ROLR arrangements were introduced there were a number of medium-sized retailers operating in the NEM, many of which were standalone (ie, did not have generation activities). The structure of the NEM has since evolved to include a number of large vertically integrated SIMPs. As a result, the financial distress of a SIMP is likely to involve issues related to generation activities as well as retail. For this reason the operation of the ROLR scheme, or a model like the SAR that addresses only retail activities, may not be adequate to support market stability if a SIMP fails.

Further work to progress an alternative

Further work needs to be undertaken to develop stability arrangements as an alternative to the ROLR scheme when a SIMP fails. The aim of stability arrangements would be to manage and respond to the failure of a SIMP while the continuity of supply to customers, the integrity of the wholesale market, and financial stability in the NEM are maintained.

Given the breadth of issues raised when considering potential stability arrangements, including insolvency processes and the potential for significant funding requirements, we are not making detailed recommendations about the design of suitable stability arrangements.

Any stability arrangement would require a package of legislative changes and funding provisions, extending beyond the electricity regulatory framework. The assessment, design and implementation of stability arrangements involve a range of parties, both within the electricity sector and outside it. It also involves trade-offs between different interests which are a matter for public policy and best considered at government level.

We recommend that stability arrangements - incorporating a form of special external administration - be designed and implemented to manage the failure of a SIMP where the application of normal insolvency processes together with the ROLR scheme could

lead to cascading retailer default and financial instability in the NEM. We recommend that the COAG Energy Council commission energy departments, in consultation with Commonwealth and State and Territory Treasuries, to form a working group to develop the detailed design of stability arrangements for the NEM, incorporating a form of special external administration, in consultation with stakeholders, relevant policy departments and regulatory bodies. A draft scope of work is provided in appendix H.

7.3 Issues in the design of stability arrangements

The framework for responding to SIMP failure set out in this chapter and in chapter 6 aims to identify appropriate response measures to manage the failure of a SIMP, while ensuring that the services provided by a failed SIMP are not threatened (such as generation and retail services), and that the financial stability of the market is maintained.

When a business goes into traditional external administration the primary objective is usually to maximise the financial return to creditors.

The purpose of the stability arrangements for the NEM is to manage the failure of a SIMP and to facilitate a solution that is consistent with the SIMP response objective set out in chapter 6. The stability arrangements would need to specify clear objectives to guide the decisions of the special external administrator and provide guidance to creditors and equity holders about the consequences of a SIMP failure.

Importantly, the objectives of the stability arrangements should focus on the maintenance of the *services* provided by the SIMP, not the *entity* in which those services are currently provided. There should be no guarantee that existing equity holders or creditors will avoid losses.

The following sections discuss some of the issues that would arise in developing stability arrangements, including:

1. which businesses and activities should be included in the regime;
2. the changes that may be required to the legal framework and market arrangements, to support the stability arrangements;
3. options to meet any interim funding requirements; and
4. how the stability arrangements are triggered, and how they are concluded.

7.3.1 Which businesses and activities should be included?

In line with the framework set out in chapter 6, the stability arrangements are relevant for those businesses that have been defined as SIMPs.

The focus of the stability arrangements would be the continuation of retail services to customers, including the associated activities or contracts that support the supply of retail services. These activities could include generation, hedge contracts and billing services.

Market participants adopt a range of corporate structures. Some vertically integrated participants are structured so that their retail and generation activities are operated by separate corporate entities, while others have a single entity that is registered with

AEMO as both a market customer (ie, a retailer) and a market generator.[95] NEM participants may also include other business activities in the same corporate entity (eg, LNG activities).[96]

One issue that arose in relation to the SAR was how the 'necessary' assets over which the administrator would be appointed is determined, and when this determination would be made. The first interim report suggested there may be benefits in legally ring-fencing the retail business, but that the costs and benefits of ring-fencing should be considered in more detail before deciding whether to implement a special administration regime.[97] However, the generation activities of the SIMP may also be relevant to support the continued supply of energy to customers, suggesting that both retail and generation activities may need to be included within any ring-fenced business.

Ring-fencing the necessary activities would impose a cost up front, but would likely minimise the complexity and cost imposed at the time the stability arrangements are triggered. Compared with the cost of ring-fencing retail activities alone, we note that the cost of ring-fencing is likely to be significantly reduced where both retail and generation assets are included within the 'ring-fence', since these two activities account for the majority of activities currently undertaken by gentailers in the NEM.

An alternative would be to identify the assets necessary for inclusion in the stability arrangements at the time of failure. This would avoid any restructuring so be less costly to market participants now, but would be likely to involve more complexity, because the assets covered by the stability arrangements would need to be identified at that time.

Furthermore, if the assets included in the stability arrangements are only identified at the time of insolvency, creditors may be uncertain about which assets are likely to be included and which are not. This could also make this approach more costly.

7.3.2 Changes to the legal framework and market arrangements

To support the effective operation of stability arrangements, changes would be needed to the current legal framework and market arrangements, such as:

- enabling for the SIMP to continue operating in the wholesale spot market while under external administration under some circumstances, as discussed in chapter 9;
- new legislation to implement the stability arrangements, including:
  - the objectives of the stability arrangements;
  - the means by which they commence;

95 See appendix D.

96 Some NEM market participants also have activities in the gas sector, so their failure would affect the gas market as well as the NEM. Our terms of reference for this review do not extend to gas issues.

97 AEMC, *First interim report, NEM financial resilience*, 4 June 2013, p38.

- specific restrictions on third parties taking actions to trigger a ROLR event without notice, including the commencement of a traditional insolvency process;
- restrictions on third parties during the course of the stability arrangements;
- the means by which they conclude; and
- provisions in respect of financial support of the stability arrangements, and any cost recovery mechanism.

Additional protections may also be considered to promote the objectives of the stability arrangements. One example is whether restrictions are placed on the rights of counterparties to terminate their OTC contracts with the SIMP when it is placed in administration. The SAR included a provision that counterparties to contracts with the SIMP should be prohibited from exercising rights of termination arising solely from the appointment of the special administrator. Without this prohibition, counterparties could terminate their hedge contracts with the SIMP, which could expose the administrator to far higher wholesale market costs of serving the SIMP's retail load, dramatically increasing the amount of funding required for the stability arrangements.

It is likely that the appointment of an external administrator would be an event of default under the wholesale contracts of an affected entity, allowing counterparties to terminate the contract. These types of termination provisions are called *ipso facto* clauses. Ipso facto clauses are, on the whole, valid and enforceable under Australian law. However, they have been subject to some criticism for being detrimental to the corporate turnaround and voluntary administration process, which is focussed on allowing a going concern to continue to trade until a plan for rehabilitation or restructuring can be put into place.[98]

Measures that restrict the rights of counterparties to contracts with the SIMP to terminate a contract or exercise other contractual rights are not seen in traditional forms of external administration in Australia. However, Allens note that "they do exist...in a more limited form in Australian judicial administration and in a more fulsome scope in Chapter 11 restructurings in the United States."[99]

Industry submissions to the first interim report raised concerns about the proposed restrictions on the rights to terminate a contract with a business in administration. One issue raised in submissions is that if an administrator is able to 'pick and choose' which contracts to honour, it could affect their counterparty's ability to net-off liabilities under their hedge contracts. We consider it would be appropriate to provide reasonable assurance that the terms of the contracts would be honoured where possible. The counterparty would not be limited in its ability to terminate contracts for reasons other than the appointment of an administrator, such as a breach of contract or cross default rights. However, the remedy available may be limited since the SIMP is insolvent.

As noted by Allens:

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98 Austin, R. and Aoun, F. (eds), *Restructuring companies in troubled times: director and creditor perspectives*, Sydney University Press, 2010.

99 Ibid, p29.

"the drafting of any proposed restrictions on third party contractual rights would need to be carefully considered. It is undesirable to restrict third party rights any more than necessary to achieve the objectives of ...administration. However, if stated too narrowly, those restrictions may not be sufficient to allow an administrator to effectively continue to trade the failed....business and preserve any potentially recoverable value from its assets during that process"[100]

7.3.3 How would the arrangements be funded?

Significant financial support would be required during the period when the stability arrangements are in place, because the SIMP would continue to operate in the market, incurring significant payment obligations. These obligations would include:

- the wholesale spot market, for energy purchases - though they may be offset somewhat by revenue from energy sales in the spot market;[101]
- the OTC contract market, to settle differences between spot prices and the strike price under derivatives contracts; and
- other payment obligations, for example fuel supply contracts and employee obligations.

While the failure of the SIMP is being addressed the significant financial obligations incurred could be funded in a variety of ways, for example:

- the market rules could be changed to require SIMPs to provide higher levels of credit support as a matter of course (in advance of any failure), to be called upon if a SIMP fails;
- an industry co-insurance fund could be established;
- government loans or guarantees;
- interim government funding - the stability arrangements would need to establish provision for any interim government support to be recovered as a first priority via the sale of assets and a back-up cost-recovery mechanism, as proposed for the SAR in the first interim report.

Establishing potential sources of funding such as a co-insurance fund, government guarantee or loan, or interim government funding is likely to change the commercial incentives of the creditors to a failing business. Without careful design, the stability arrangements could shift some of the risk of failure from the owners and creditors of an entity onto a broader industry group (in the case of the co-insurance fund) or onto the government (and indirectly onto customers or taxpayers).

For this reason, it is important that any external funding would be made under limited, specific conditions, designed to minimise moral hazard.

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100 Allens, *Dealing with financial distress in the national electricity market, special administration regime for electricity retailers*, 10 May 2013, p15.

101 Modelling by AEMO suggests that a retailer with market share of 20% could incur weekly settlement costs of $24 million to $42 million, depending on prevailing spot market prices.

7.3.4 How are the stability arrangements triggered, and how are they concluded?

Chapter 6 outlined a proposed framework for deciding whether the failure of a SIMP could be managed via the ROLR arrangements and normal insolvency processes. Under this framework, the stability arrangements would be an option to be triggered where the normal processes were not expected to meet policy objectives, including the financial stability of the NEM.

In order for these alternative arrangements to operate effectively, there must be a period of time - *before* the ROLR regime or standard insolvency procedures are initiated - when a decision can be made on the most appropriate course of action. This means that third parties would need to be required to give notice to the person with the power to invoke stability arrangements *before* taking any action that would trigger a ROLR event or an external administrator to be appointed, in relation to the market participants covered by the stability arrangements.

For the reasons set out in chapter 6, we suggest that the federal Minister with portfolio responsibility for the energy market could ultimately be responsible for making decisions relating to the stability arrangements. This does not imply that the Commonwealth government would be responsible for the financial support associated with stability arrangements, but it recognises the national nature of SIMPs and the potential role for the Commonwealth in co-ordinating an effective response, including interim financial support if necessary.[102]

Opportunities for the private sector to fund or restructure the business should be explored prior to any decision to trigger stability arrangements. However, it is likely that privately funded restructuring options will have been extensively explored prior to the point of insolvency.

If the stability arrangements involved the appointment of an external manager or administrator, they could be designed so that the Minister made the appointment directly, or alternatively that the Minister was required to apply to a court for appointment. Direct appointment has the advantage of allowing for the appointment to be made extremely quickly if necessary. The main practical benefit of court appointment, however, is that it reduces the risk of administrative challenges as to the validity of the appointment. A court would need to have clear criteria to guide its decision, and discretion as to whether or not to make the appointment. Allens has provided further information about the issues relating to appointment of administrators, including the precedent in the United Kingdom special administration regime for energy supply companies.[103]

It would also be important to identify the circumstances in which the stability arrangements cease, and what would occur from that point. In broad terms it would be

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102 There are precedents for Commonwealth Government involvement where there is a policy objective to maintain the provision of services, eg, the insolvency of ABC Learning childcare centres in 2008. This precedent is discussed in more detail in the Options paper - see AEMC, *Options paper, NEM financial market resilience*, 9 November 2012, pp101-103.

103 Allens, *Dealing with financial distress in the national electricity market, special administration regime for electricity retailers*, 10 May 2013, pp22-23.

appropriate to end the stability arrangements when their objectives have been met. As an example, under the SAR it was envisaged that the administration would conclude when all electricity customers had been transferred to another retailer. At that point the company would be returned to the control of its directors or placed directly into liquidation.

7.4 Consultation questions

The Commission invites submissions on the issues raised in this chapter, including the following:

Question 2 Managing the failure of a SIMP - stability arrangements

2.1 Do you agree that both the retail and generation activities of a vertically integrated energy business should be considered as part of any stability arrangements?

2.2 What do you see as the potential options for the design of a stability arrangement, and what would be its key features?

8 Changes to existing arrangements - the ROLR scheme

Relative to the current arrangements, the changes proposed to the ROLR scheme would enable the scheme to operate effectively in a broader set of circumstances, without exacerbating risks to financial system stability in the NEM.

We recommend a number of changes to the ROLR scheme which target the cash flow and additional credit support challenges faced by a ROLR. If implemented, financial shocks to the NEM could be absorbed more readily through a more effective sharing of the risk across the market. In summary, our draft recommendations involve:

- changes to the ROLR scheme to reduce the impact of increased cash flow and/or credit support requirements, through:
  - revised ROLR cost recovery arrangements, to give the designated ROLR greater certainty that it can quickly recover its costs, by clarifying the type of costs allowed and recommending that the AER make a provisional assessment of ROLR costs within a short timeframe where these costs are substantial;
  - delayed designation of ROLRs, to increase the potential for the AER to appoint multiple ROLRs;
  - limiting the extent to which the ROLR arrangements apply to very large customers, who will have the opportunity to negotiate their own back-up retailer should a ROLR event occur;
- changes to credit support arrangements to reduce the impact of the ROLR's increased credit support requirements, through:
  - delaying additional credit support requirements for AEMO and for DNSPs; and
  - continued efforts by AEMO and AER to improve information and systems to enable the smooth transfer of customers.

This chapter sets out our draft recommendations for changes to the ROLR scheme so that it can operate effectively in more situations. Even taking into account the recommendations in this chapter to improve its effectiveness and operation, the ROLR scheme may still not be effective in the event of a SIMP failure.

The first interim report made a number of draft recommendations for changes to the ROLR scheme. The Commission has considered the submissions made in response to the first interim report, undertaken further analysis, and commissioned advice from Frontier Economics.[104] As a result we have amended and refined some of the recommendations made in the first interim report, and made additional recommendations.

104 Submissions to the first interim report are summarised in appendix B. The Frontier Economics analysis is published in Frontier Economics, *Policy responses to mitigate the risk of financial contagion in the NEM*, July 2014.

8.1 Risk to NEM financial system stability from the failure of a large retailer

Chapter 3 explains the challenges faced by the ROLR(s)[105] when it acquires a large number of customers under the ROLR scheme.

The key challenges for the designated ROLR arise in two areas:

1. Cash flow risk, ie, the risk that the ROLR will not be able to meet payment obligations due to a mismatch between the timing of money received and payments due, including payments for additional energy purchased, and an initial lack of appropriate hedge contracts; and
2. Additional credit support in relation to the acquired customers, which must be provided to AEMO and, possibly, DNSPs.

8.2 Summary of recommendations

Many of the recommendations would change the allocation of risks borne by different parties involved in the NEM - including retailers, generators, networks businesses, customers, and potentially government. These changes have been assessed in light of whether they result in a more efficient sharing of risk, so that:

- the risk can be reduced or managed at minimum cost; and
- a financial shock to the market can be absorbed more readily, reducing the risk to financial system stability in the NEM and the potential need for government intervention,

without leading to inefficient decision-making by market participants.

Our recommendations are summarised in table 8.1, and target the key challenges facing the ROLR described in section 8.2 above.

105 The 'designated ROLR' is the retailer appointed as the ROLR for a connection point in respect of a ROLR event. It will be the 'default ROLR' appointed by the AER under the NERL, unless the AER provides AEMO with written notice before the ROLR event occurs, appointing another registered ROLR as the ROLR for the event.

Table 8.1 Summary of recommended changes to the ROLR scheme

Recommendation	Summary of benefits	Any change from recommendation in first interim report?
Changes to the ROLR to reduce the impact of increased cash flow and/or credit support requirements:		
Revised cost recovery arrangements - to specify the type of costs allowed, and to recommend the AER to make a provisional assessment of ROLR costs within a short timeframe if ROLR costs are substantial.	• Improves the certainty that reasonable ROLR costs can be recovered, providing a more secure basis for the ROLR to seek financing; • Brings forward the recovery of costs borne by the ROLR if these costs are substantial	Amended recommendation.
Delayed designation of ROLRs	Increases the potential for the AER to spread the allocation of the failed retailer's customers (and the associated obligations) between multiple ROLRs, by giving them more time to decide which retailer(s) should be appointed as ROLR(s)	Unchanged recommendation
Limiting the extent to which ROLR arrangements apply to very large customers (those with an individual connection point with consumption of 10GWh per annum or greater)	• Very large customers have the opportunity to nominate their own back-up retailer in advance, on negotiated terms and conditions; • Very large customers have a 1 week 'period of grace' following a ROLR event to nominate a back-up retailer, before disconnection; • Maintains benefits of ROLR scheme for smaller customers • Reduces burden on designated ROLR of increased cash flow and credit support obligations resulting from very large customers.	New recommendation
Changes to credit support arrangements to reduce the impact of the ROLR's increased credit support requirements:		
Delay in additional credit support requirements for AEMO	Gives the ROLR more time to meet AEMO credit support provisions in relation to ROLR customers, which may be significant.	Unchanged recommendation

Recommendation	Summary of benefits	Any change from recommendation in first interim report?
Delay in additional credit support requirements for DNSPs	Gives the ROLR more time to meet DNSP credit support provisions, which may be significant.	New recommendation
Improving information and systems		
AEMO and AER should continue to improve information and systems to provide more accurate customer information and to enable the smooth transfer of customers to the ROLR(s)	Improves the ROLR's ability to hedge the new load (since it will have better information about load characteristics), and to establish effective customer communication and billing arrangements.	Unchanged recommendation

The recommendations are discussed in more detail in the following sections.

We have also assessed other options that we have not recommended at this time, either because:

- they do not confer the same level of net benefits as the options recommended, in terms of the assessment framework set out in chapter 1 (including mitigating the risk of financial contagion, efficient allocation of risk, and the objectives set out in the NEO); or
- it may be more suitable to consider them in other forums in the NEM, because they have broad implications for the NEM and its participants that extend beyond the financial stability of the NEM, which is the focus of this review.[106]

Two options that we have not recommended are discussed further in this chapter - temporarily reducing the market price cap (MPC) following a ROLR event, and deferring settlement for high-priced periods in relation to ROLR customers.

Also, the options paper raised the question as to whether a government owned entity could post credit support to AEMO to meet the increased credit support obligations on the designated ROLR for an initial period.[107] The first interim report included a proposal to amend the NER to permit the Commonwealth Government to provide credit support.[108] Such an amendment would enable the Commonwealth Government to provide credit support, but would not place any obligation on the Government to do so.

We consider that if the proposed amendments to the ROLR scheme were implemented, the ROLR would be more able to manage the additional financial obligations without any external support. Therefore it is likely that there would be no need for this amendment and we have not included this in our draft recommendations.

We note that the possibility of the Commonwealth Government providing credit support to NEM participants might be part of any alternative arrangements to be applied instead of the ROLR. Therefore, consideration on this amendment, and the appropriate mechanisms to give effect to such an arrangement, could be part of the further work into stability arrangements, which were discussed in chapter 7.

Our analysis and draft recommendations have been developed using the ROLR scheme included in the NECF. We have assumed that this ROLR scheme applies across the NEM. The NECF has not been adopted in all jurisdictions. New South Wales, South Australia, Tasmania, ACT have all already adopted the NECF and Queensland is scheduled to adopt the NECF on 1 July 2015.

If our recommendations are implemented before the NECF has been adopted across the NEM, jurisdiction-specific changes would be needed in the non-NECF jurisdictions.

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106 For example, Alinta's submission to the first interim report suggested that this review consider the costs and benefits of a shorter settlement cycle. This would reduce the level of credit support required by AEMO, and result in a transfer in the required working capital from generators to retailers. If combined with more frequent customer billing, it could reduce the overall level of cash flow risk borne by NEM participants.

107 AEMC, *Options Paper*, 9 November 2012, p97.

108 AEMC *First interim report*, 4 June 2013, p73.

8.2.1 Application of revisions to the ROLR scheme

We recommend that the proposed changes apply to all ROLR events, irrespective of the size of the failing retailer. Our recommendations involve changes to the ROLR scheme which are expected to improve the resilience of the ROLR immediately following its appointment, so it would be less likely to experience financial distress as a result of the financial obligations it acquires on being appointed the ROLR. Relative to the current arrangements, the ROLR scheme would be able to operate effectively in a broader range of circumstances.

Where a small retailer fails, the ROLR may be able to absorb the financial consequences of acquiring the additional customers without needing the additional measures recommended in this chapter. Nonetheless, we see benefit in the simplicity and certainty that derives from have the same rules under the ROLR scheme, irrespective of the specific circumstances of that ROLR event. Furthermore, where the failed retailer is small the associated financial impact on other participants in the market would also likely be small, and the change in the allocation of risk proposed in these options would not likely be significant.

8.3 Revised cost recovery arrangements

Overview of draft recommendation

The Commission recommends that:

- existing ROLR cost recovery provisions be amended to give the ROLR additional certainty that it can recover the reasonable costs associated with a ROLR event; and
- the AER considers making an interim determination (subject to revision) on ROLR cost recovery within a short period of an application, where ROLR costs are substantial.

8.3.1 Overview of current arrangements

The NERL requires that ROLRs supply electricity to:

- small customers transferred from a failed retailer at the ROLR's standing offer prices;[109] and
- large customers transferred from a failed retailer at prices published on the ROLR's website, which must be 'fair and reasonable'.[110]

The NERL incorporates a process through which a designated ROLR can apply to the AER to recover the costs that it incurs on or after a ROLR event.[111] A default ROLR

109 NERL, section 145.

110 NERL, section 146.

111 NERL, section 166. Under the AER's ROLR guidelines, applications must be made within nine months of the relevant ROLR event. See AER, *Retailer of last resort statement of approach*, November 2011.

may also apply to recover costs incurred in preparing for ROLR events.[112] On receipt of an application the AER must determine a "ROLR cost recovery scheme". The AER must be guided by the following principles:

- the registered ROLR should be provided with a reasonable opportunity to recover the reasonable costs that it incurs with respect to the ROLR scheme;
- the recovery of costs should allow for a return commensurate with the regulatory and commercial risks with respect to the ROLR scheme; and
- the registered ROLR will itself bear some of the costs, in proportion to its customer base.[113]

The AER is required to make a determination on how much of a ROLR's costs should be recovered from one or more DNSPs, who are entitled to recover this cost from their customers.[114]

The AER has published a ROLR statement of approach, which provides some guidance as to how it will assess cost recovery applications.[115] It sets out the general principles for cost recovery scheme determinations, and examples of how the AER may exercise its powers.

Further detail of the current arrangements is provided in the first interim report,[116] and in the report by Frontier Economics.[117]

8.3.2 Draft recommendation

We recommend that the ROLR arrangements be modified to provide greater certainty to the designated ROLR(s) so that they can quickly recover the reasonable costs that they incur following a ROLR event. Our recommendation has been amended since the first interim report.

This requires amendments to the NERL to:

- remove the requirement in section 166 that the AER, when making its decision, be guided by the principle that the registered ROLR will itself bear some of the costs, in proportion to its customer base;
- provide a list of specified types of costs that the ROLR has the right to recover in relation to a ROLR event (without limiting cost recovery to the range identified), such as:
  - administration costs;
  - energy costs in relation to the acquired customers (to the extent that they are not recovered in the prices charged to those customers);

112 NERL, section 166(3)(a).

113 NERL, section 166(7).

114 NERL, section 167.

115 AER, *Retailer of last resort statement of approach*, November 2011.

116 AEMC, *First interim report, NEM financial market resilience*, 4 June 2013, pp 57-60.

117 Frontier Economics, *Policy responses to mitigate the risk of financial contagion in the NEM*, July 2014, pp. [52-53].

  - financing costs in relation to additional credit support that is required to be provided to AEMO or DNSPs in relation to the acquired customers; and
  - financing costs to cover the period from when the costs are incurred and when they are recovered under this mechanism;
- specify a period during which these costs can be claimed, for example three months from the date of the ROLR event, with discretion for the AER 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.

We also recommend that the AER publish more guidance on how it will assess ROLR costs. In addition, we recommend that the AER consider making a provisional assessment of ROLR costs (subject to revision) within a short timeframe if ROLR costs are substantial. This would not require any change to the NERL, which already provides for amendments to ROLR cost recovery schemes.[118]

These recommendations would not remove the ability of a prospective ROLR to propose waiving the recovery of some of the costs related to being a ROLR. This leaves open the potential for a retailer to offer to be an additional ROLR on the basis that it absorbs some of the costs of the ROLR event (in return for acquiring the benefit of new customers).

8.3.3 Stakeholder submissions

Submissions were generally supportive of the draft recommendation in the first interim report relating to revised cost recovery mechanisms.[119] The AER supported the proposed arrangements, but maintained that cost recovery arrangements for small to medium ROLR events should preserve the principle that the ROLR will itself bear some of the costs.

The ENA submitted that any compensation payments to assist the designated ROLR should be accompanied by timely distributor cost recovery arrangements or be linked to mechanisms to support timely recovery of costs from customers.

8.3.4 Commission considerations and conclusions

Under the existing NECF regime, the designated ROLR *may* be able to recover all of its reasonable costs. However, some of the NERL provisions may undermine the confidence of the designated ROLR - and those who finance it - that the ROLR can recover all of its reasonable costs. Furthermore, the NERL provides little certainty as to what costs are recoverable. Instead, the AER is given broad discretion.

If cost recovery is delayed and uncertain, it could present cash flow problems for the ROLR(s) and make it more difficult for them to secure financing. Where the ROLR event involves the failure of a large retailer, this could result in financial distress or failure of the ROLR, and lead to cascading retailer failure and instability in the NEM.

118 NERL, section 168.

119 A summary of submissions to the first interim report is available in appendix B. Individual submissions are available on the AEMC website at AEMC website at www.aemc.gov.au/Markets-Reviews-Advice/NEM-financial-market-resilience.

This recommendation would reduce the financial uncertainty and cash flow risk faced by the designated ROLR(s). It would have a number of benefits:

- It would give the designated ROLR more confidence about the timing of cost recovery, improving cash flow following a ROLR event.
- The designated ROLR would be likely to have more success in borrowing funds to cover the short-term costs of being a ROLR, since it would have more certainty of cost recovery, and the timing of cost recovery. Thus it reduces the risk of cascading retailer failure.
- Similarly, the designated ROLR would be likely to have more success in obtaining the additional credit support required for AEMO and for DNSPs, since its future cash flows would be more certain.
- It would be likely to increase the appetite among retailers to submit expressions of interest to act as additional ROLRs and to be appointed as designated ROLRs. The appointment of multiple ROLRs would reduce the impact of the ROLR event on each designated ROLR, spread the risks of being a ROLR among several retailers, and thereby reduce the likelihood that the ROLRs experience financial distress or failure.
- By increasing the potential for multiple ROLRs it may also improve the long term competitiveness of the market by spreading the failed retailer's customers across a range of retailers.

This recommendation is well targeted because it addresses potential sources of financial distress and cascading retailer failure - uncertain cost recovery and its impact on cash flow, financing and access to credit support.

The AER would retain the ability to review whether the costs incurred by the designated ROLR(s) are reasonable. Our recommendation has been amended since the first interim report to recommend the AER make an interim determination on a compensation claim, where the costs related to the ROLR event are substantial. This interim determination would be subject to revision if necessary following further analysis by the AER.

This amendment has been made following advice from Frontier Economics that, while it is beneficial to assist ROLRs to meet immediate cash flow needs, it would be inappropriate to constrain the thoroughness of the AER's assessment of the costs incurred by ROLRs.[120] However, we support Frontier Economics' view that "the key consideration is that the AER should not seek to be too 'wise after the event'",[121] and that the AER should 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.

We do not support the AER's view that the ROLR should bear a proportion of the costs of being a ROLR for small or medium ROLR events. We note that:

120 Frontier Economics, *Policy responses to mitigate the risk of financial contagion in the NEM*, July 2014, p59.

121 Ibid, p60.

- we think it is important for ROLRs to have confidence that reasonable costs will be recovered, to help ensure they can seek finance on the basis of future cash flows; and
- if retailers see a significant benefit in the customer base on offer, our recommendations to facilitate multiple ROLRs[122] will encourage retailers to offer competitive terms to be the designated ROLR. This may include bearing some of the costs of being a ROLR.

This recommendation offers an appropriate balance between providing customers with protection from the pass through of inefficient costs, while recognising that the ROLR is performing an important function by ensuring customers have continuity in retail services and electricity supply following the failure of a retailer.

In addition, enhancing the ability for the ROLR to recover the reasonable costs of performing its functions offers benefits across the NEM, by reducing the risk of cascading retailer failure and the adverse impact this would have on customers. Furthermore, some of our recommendations offer the potential to reduce ROLR costs, to the benefit of customers (for example, providing the ROLR with more time to source additional credit support may mean it can be obtained on more competitive terms and conditions).

The NERL gives the AER flexibility to determine the extent to which ROLR costs are recovered from ROLR customers, or from a broader group of customers via a 'distributor payment determination'.[123] We have not recommended any changes to the AER's discretion in determining how ROLR costs are recovered.

In addition to the issues raised in Frontier's report, we recommend that the AER take the following factors into account when considering appropriate cost recovery arrangements:

- providing the ROLR an opportunity to recover its ROLR costs within a reasonable period of time, particularly where those costs are significant. It is likely to be quicker and more straightforward to recover costs from a small number of DNSPs via a distributor payment determination, than it would be from a large number of ROLR customers, particularly where there are deficiencies in the information available about those customers. Ultimately, such costs will be recovered from customers;
- whether cost recovery via retail tariffs is practical, given that customers are able to change retailer and will have an incentive to do so if the ROLRs retail tariffs rise significantly above those offered by other retailers.

122 Several of our recommendations will facilitate multiple ROLRs - increasing the time for the AER to decide which retailer(s) should be appointed as ROLR(s); giving the ROLR(s) more time to meet AEMO and DNSP credit support provisions in relation to ROLR customers; and improving the certainty that reasonable ROLR costs can be recovered.

123 NERL sections 166 and 167.

8.4 Delay designation of ROLRs

Overview of draft recommendation

The Commission recommends that the ROLR regime is amended to delay the time at which the designated ROLR is appointed by the AER, to allow greater potential for multiple ROLRs and a more considered allocation of customers. The designated ROLR would be appointed as the ROLR for the relevant ROLR event and acquire the failed retailer's customers from the transfer date specified by the AER (which is likely to be the date the ROLR event occurred).

8.4.1 Overview of current arrangements

The NERL requires a "default ROLR" to be appointed by the AER ahead of time for each electricity connection point.[124] In practice, default ROLRs are generally the original incumbent retailers in the area who previously acted as ROLRs under the former jurisdictional schemes. Retailers can also submit an expression of interest to the AER to become an 'additional ROLR'. The AER has established two categories of additional ROLRs - a 'firm offer' category where retailers pre-commit to the terms and conditions under which they would be appointed as a ROLR, and a 'non-firm' category where retailers register their interest in being a ROLR but do not commit themselves to acting in that role. The AER must maintain and publish a register of ROLRs.[125]

When a ROLR event is triggered, a designated ROLR is appointed for each electricity connection point, and is responsible for taking on new customers and facilitating customer transfers from the failed retailer. Under the NERL the default ROLR is taken to be appointed as the designated ROLR, unless the AER appoints a registered ROLR as a designated ROLR in respect of a ROLR event before the event actually occurs, and notifies AEMO before the transfer date.[126] Under protocols established between the AER and AEMO, the default ROLR will be appointed unless the AER advises AEMO before a default notice is issued.

The AER has provided more guidance on its decision-making process in its statement of approach.[127] It notes that a major factor in its selection of designated ROLRs for appointment will be the length of time it has to make the decision. The more warning the AER has of an impending ROLR event, the more registered ROLRs it will be able to consider.

Where there is less than a few hours' notice of a ROLR event, the AER has indicated it is most likely to appoint default ROLRs. With short notice (ie, up to 48 hours), the AER suggests it may also be able to consider additional ROLRs with firm offers. Additional ROLRs with firm offers have agreed not to be consulted prior to being appointed as designated ROLRs (up to the maximum permitted by their terms and conditions). Where the AER has more than 48 hours' notice of a ROLR event it may consider (and

124 NERL, section 125.

125 NERL, section 127.

126 NERL, section 132.

127 AER, *Retailer of last resort statement of approach*, November 2011, pp11-12.

consult with) other registered ROLRs. This would include non-firm additional ROLRs who have not agreed to be designated without further consultation at the time of an event.

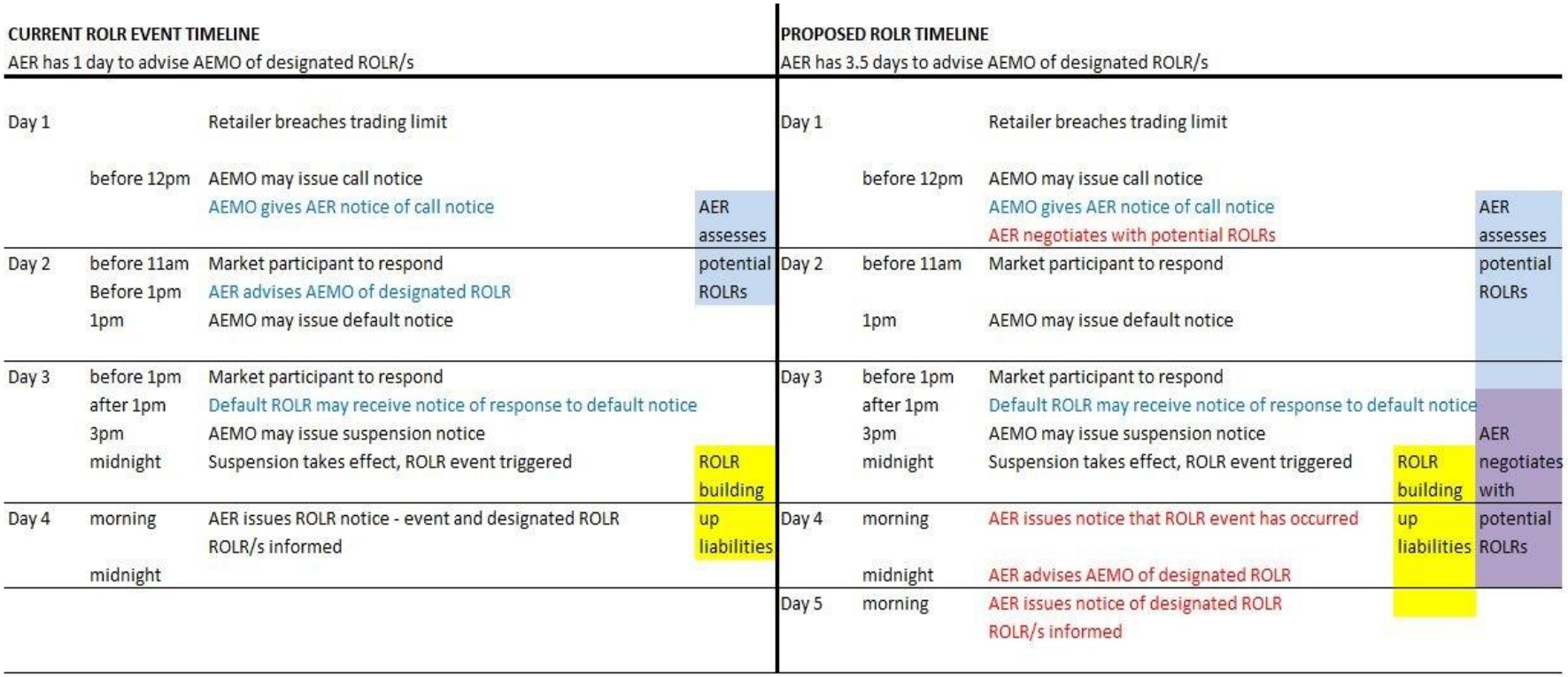
8.4.2 Draft recommendation

As described in the first interim report, the NERL would be amended to increase the time allowed for the AER to advise AEMO of the designated ROLR(s), to 24 hours after the ROLR event. Protocols between AEMO and the AER should be amended to ensure consistency with this amended timeframe.

As a result, the AER would issue a notice identifying the designated ROLR(s) 24 hours later than under the existing NECF framework, and the designated ROLR(s) would be informed of their appointment 24 hours later than they are at present. The following figure summarises the proposed changes to the ROLR timeline where the ROLR event is triggered by a failure to honour a call notice.[128]

128 It is also possible that a ROLR event may occur without AEMO having issued a call notice or default notice (although it is quite unlikely that the AER would issue a ROLR notice in a situation where AEMO hasn't also issued a default notice).

Figure 8.1 Proposed changes to ROLR timeline triggered by failure to honour a call notice



The left hand side of the diagram summarises the ROLR timeline under the current protocols between the AER and AEMO, where a retailer is suspended. The AER has up to 24 hours after a call notice to assess potential ROLRs and advise AEMO if a retailer other than the default ROLR should be appointed as the designated ROLR. However, it is possible the AER may not have any time at all to advise AEMO of an alternative ROLR before the default notice is issued, if AEMO does not issue a call notice.[129]

The right hand side of the diagram shows the proposed revision to the ROLR timeline. The AER has an extra two and a half days to advise AEMO of the designated ROLR(s). This gives the AER more time to assess the most appropriate allocation of customers following a ROLR event, to negotiate with different retailers to allocate customers to designated ROLR(s).

As a result of these changes, the AER would issue a notice identifying the designated ROLR(s) 24 hours later than the existing NECF timeframe, and the designated ROLRs would be informed of their appointment 24 hours later than they are at present.

This recommendation would require a distinction to be made between the following dates, which currently occur simultaneously under the NERL ROLR provisions:

- the date that the ROLR event occurs (for example the date of the suspension of the failed retailer from the NEM by AEMO, which constitutes a ROLR event under the NERL); and
- the date that the designated ROLR is taken to be appointed.

The designated ROLR would be liable to AEMO for the energy consumed from the transfer date, while also being entitled to bill customers for energy consumed from that same point in time, as is the case under the current NECF provisions.[130]The period in which the designated ROLR builds up liabilities, but before it is advised that it is the designated ROLR, is shown in yellow in the above diagram. During this time the ROLR is likely to be unhedged in relation to the energy purchases of the ROLR customers. Our recommendation results in this period increasing by 24 hours, though the designated ROLR is likely to have some knowledge of its potential appointment as part of the AER's process.

8.4.3 Stakeholder submissions

Submissions to the first interim report regarding this issue were mixed.[131]

The AER, the National Generators Forum (NGF) and AEMO supported the extension of 24 hours for the AER to advise AEMO of the designated ROLR(s). The ENA sought

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129 If the retailer breaches its trading limit AEMO will issue a call notice, but if they fail to pay an invoice or provide credit support, AEMO is likely to go straight to a default notice.

130 The transfer date may be on, before or after the publication of the ROLR notice by the AER, but if the ROLR event is revocation of retail authorisation or suspension from the wholesale market, the transfer date is the date of revocation or suspension - see NERL, section 136(5). Figure 8.1 assumes that the ROLR event is triggered by market suspension.

131 A summary of submissions to the first interim report is provided in appendix B. Individual submissions are available on the AEMC website at www.aemc.gov.au/Markets-Reviews-Advice/NEM-financial-market-resilience.

clarification of how this would work for networks and retailers in practice. AEMO noted the importance of having sufficient information and authority to execute the ROLR process following suspension.

Alinta suggested that while a delay may be desirable, additional planning may avoid the need for a delay. Alinta also suggests that options should be considered for passing through to customers the costs associated with the delay, and that the exposure to generators should be capped.

Energy Australia also suggested that a short delay may be acceptable if it materially assisted the AER to allocate customers, but that the AER should actively maintain and encourage a market driven allocation through voluntary pre-registration of interest.

Origin did not support delaying the appointment of the designated ROLR, suggesting that a large ROLR event could be managed most effectively where ROLRs have previously registered as firm or non-firm ROLRs and indicated their capacity to take customers.

8.4.4 Commission considerations and conclusions

As noted in the first interim report, the current provisions of the NERL make it unlikely that any retailer other than the default ROLR would be appointed as the designated ROLR, given the limited timeframe for the AER to designate anyone other than the default ROLR. Where the retailer in financial distress is large, this would be likely to be problematic for the default ROLR, because it would take on the liabilities and credit support requirements relating to a large number of customers.

It is also possible that the retailer facing suspension is a default ROLR, and that there are no firm additional ROLRs that could be appointed readily to take on its customers. In this case, the AER could be forced to make a decision at very short notice with no specific legal structure and limited information to guide it. This situation could require the AER to appoint a retailer as a designated ROLR without its consent.

The advantages of delaying the designation of the ROLR(s) include:

- **Facilitating multiple ROLRs -** The main limitation on the AER's ability to appoint multiple ROLRs relates to the tight timing of designation prior to a ROLR event occurring.

  In their report to the (then) Ministerial Council on Energy (MCE) as part of the development of the NECF ROLR regime, NERA Economic Consulting and Allens Arthur Robinson noted that the most effective means of addressing the issue of a large retailer failure was likely to be allocating the failed retailer's customers to more than one designated ROLR.[132]

  Spreading customers between a number of retailers may also help maintain the long term competitiveness of the retail market, since it could reduce the concentration of customers in a small numbers of retailers;

132 NERA Economic Consulting and Allens Arthur Robinson, *Retailer of Last Resort – Review of current jurisdictional arrangements and development of a national policy framework, Final report prepared for the MCE retail policy working group*, 29 January 2009, pp66-67.

- **More time to consider the optimal allocation of customers** - With more time available, the AER may be better placed to judge which retailers have sufficient financial resources to meet the obligations of the ROLR, and therefore to minimise the risk of the designated ROLR failing. There would be more time for the AER to negotiate terms with potential ROLRs, while also maintaining confidentiality as the retailer tries to remedy the situation or effect a trade sale. There would be greater capacity for the AER to involve retailers who have made non-firm offers to be additional ROLRs. These retailers would have the benefit of knowing more about the extent of obligations they would incur as a designated ROLR (such as the number of customers involved and the current spot market prices).

We agree with stakeholders who suggested that pre-planning as much as possible would assist the AER in deciding how to allocate customers, but we do not believe this alone would be sufficient to support the best decision on the allocation of a failed retailer's customers. We also agree that the ROLR arrangements could provide better incentives for retailers to nominate as ROLRs, and have made recommendations to support these incentives (eg, through more certainty regarding the nature and timing of cost recovery).

While a delay in designating the ROLR means the ROLR would inherit an unhedged exposure to the spot price for all energy consumed over a longer period, the impact would be mitigated when combined with our recommendation to increase the certainty that the ROLR's reasonable costs would be recovered. Furthermore, the proposed changes to the timeline provide an opportunity for the AER to hold discussions with potential ROLRs, so retailers would likely be aware of their potential appointment and can begin preparations to put hedging contracts into place as soon as possible after appointment.

In implementing the delay to the designation of the ROLR, careful thought would need to be given to what notices are issued - and when - to affected participants, institutions and the public. Currently, after a ROLR event occurs, the AER must decide as soon as practicable whether to issue a ROLR notice.[133] If it decides to issue a ROLR notice, the notice is comprehensive in that it provides information on what the ROLR event was, the failed retailer, the ROLR appointed and the transfer date.

Under the timeline proposed in figure 8.1, the AER would issue a notice on day 4 that a ROLR event had occurred and then another notice on day 5 specifying the designated ROLR. We note that separating the notices in this way may cause confusion to the customers of the failed retailer if they do not have information on who the designated ROLR is and when they will be transferred. One alternative would be for the AER to delay publication of the ROLR notice until the designated ROLR is determined by the AER.

We welcome stakeholders' views on the best approach to, and timing of, the AER's notices to communicate with market participants and consumers, in order to minimise uncertainty and confusion.

133 NERL, section 136.

8.5 Amending ROLR arrangements for very large customers

Overview of draft recommendation

The Commission recommends limiting the extent to which the ROLR scheme applies to very large customers (those with an individual connection point with consumption of 10GWh per annum or greater).

Very large customers would continue to have the option to arrange their own back-up retailer before a ROLR event occurs, on terms and conditions agreed by the customer and the back-up retailer. AEMO would need to be notified of this agreement.

If their current retailer fails, and a back-up retailer has already been notified and recorded in the market systems, the very large customer would be transferred (on the transfer date) to their back-up retailer in the same way as if, under current arrangements, it had nominated a retailer.[134]

If a back-up retailer is not notified to the AER or AEMO before a ROLR event, very large customers would have a one week 'period of grace' to organise a back-up retailer and notify AEMO. The very large customer would be transferred (on the transfer date) to that retailer in the same way as if, under current arrangements, it had nominated a retailer.[135] The back-up retailer would take financial responsibility for the relevant connection point from the transfer date defined for the ROLR event.

If a back-up retailer is not notified to AEMO within 7 days of the ROLR event then the customer would be disconnected. Sensitive loads (eg, major health and public transport services) would not be included in the definition of 'very large customer' irrespective of their level of consumption, so would not be at risk of disconnection. If they do not nominate a retailer, sensitive loads would be transferred to the ROLR in line with current arrangements.

The back-up retailer would be responsible for the very large customer's purchases backdated to the transfer date determined for the ROLR event.

8.5.1 Overview of current arrangements

The NERL currently defines a large customer but does not define a separate category for very large customers. Under the NERL, a large customer (ie, a business customer who consumes energy at or above 100 MWh per annum[136]) can opt out of the normal ROLR arrangements and reach agreement with a retailer (the 'nominated retailer') to become its retailer if a ROLR event occurs.[137] The large customer and the nominated retailer agree the terms and conditions of supply, and must both notify AEMO in writing. In the absence of such an agreement, a large customer affected by a ROLR event would be

134 See NERL, section 140(7).

135 Ibid.

136 National Energy Retail Regulations, section 7.

137 NERL, section 140(7).

transferred to the designated ROLR. While the ROLR must charge small customers their 'standing offer' tariff, they can charge large customers a 'fair and reasonable' tariff, which must be published on their website.[138]

8.5.2 Draft recommendation

The NERL would be amended to create a new category of customer known as very large customers. The National Energy Retail Regulations would define a threshold for a 'very large' customer - we propose this threshold be defined as a customer that has at least one connection point with consumption of 10GWh per annum or greater. Sensitive loads (such as major health and transport services) with consumption at any connection point of 10GWh or greater would be defined as 'large customers', not 'very large' customers, for the purposes of the ROLR arrangements.[139]

The extent to which the ROLR arrangements apply to very large customers would be amended so that they could:

- arrange their own back-up retailer in the event that their current retailer is the subject of a ROLR event (in the same way that they can currently nominate a retailer under the ROLR arrangements);
- negotiate the terms and conditions under which they receive services from the back-up retailer.

If a ROLR event occurred in relation to the retailer supplying very large customers:

- where a very large customer had arranged a back-up retailer, they would be transferred to that retailer with effect from the transfer date;
- where very large customers that had not nominated a back-up retailer would have a seven day 'period of grace' within which to organise a back-up retailer and notify AEMO. They would continue to be supplied for this one week period of grace following the ROLR event. Energy consumed during this week would be the responsibility of the back-up retailer, so would need to be included in the terms and conditions negotiated by the back-up retailer and the very large customer; and
- if a very large customer did not arrange a back-up retailer within seven days of the ROLR event, the very large customer would be subject to disconnection. In this case there is a risk that AEMO may not be paid for purchases of energy during the 7 day period of grace. In developing the detailed design of this proposal, further consideration will be needed to determine how best to manage this risk. The Commission welcomes stakeholder views on this matter.

To support this arrangement:

- retailers would be required to inform their customers that meet the definition of a very large customer of the ROLR arrangements applying to those customers;

138 NERL, sections 145 and 146.

139 Under clause 4.3.2(f)(1) of the NER, the Jurisdictional System Security Coordinator for each jurisdiction must provide AEMO with a schedule of sensitive loads. These include major health facilities, emergency services and public transport.

- very large customers and back-up retailers would be required to notify AEMO in writing, so that AEMO could transfer the customer to their back-up retailer if a ROLR event occurred.

This recommendation has been strengthened from the First Interim Report, which suggested that large customers be *informed* of their right to 'opt out' of the ROLR arrangements and nominate their own back-up retailer in case of a ROLR event, but did not place any *obligation* on very large customers to nominate a back-up retailer.

8.5.3 Stakeholder submissions

A number of submissions suggested a strengthening of the recommendation in the first interim report. Alinta Energy suggested the ROLR be made an 'opt-in' for large customers rather than an 'opt-out',[140], while Energy Australia suggested limiting the ROLR scheme to small businesses and households.[141]

8.5.4 Analysis by Frontier Economics

In light of submissions supporting a strengthening of this recommendation, the Commission requested advice from Frontier Economics on this matter. Frontier Economics noted that if large or very large customers could 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".[142]

However, Frontier also suggested that there were likely to be drawbacks to this policy, including:

- that it would impose a wholesale purchase cost exposure to either the failed retailer, AEMO or generators as a whole;
- disconnecting a large number of customers within a reasonable timeframe would not be feasible or efficient, given their likely underlying willingness to pay for electricity;
- it is not clear how an obligation on large customers to nominate their own ROLR would be enforced;
- large customers would likely nominate another large retailer to be their ROLR, so it may not fundamentally change the overall financial risks facing the retailers remaining after a large retailer failure.

8.5.5 Commission's considerations and conclusions

The revised arrangements recommended for very large customers offer potential benefits for those customers themselves, and would also reduce risks to financial system stability in the NEM:

- the benefit to a large customer of entering an agreement with a back-up retailer before a ROLR event occurs is that it could gain greater certainty of the terms and

140 Alinta Energy, submission to the first interim report, summarised in appendix B

141 Energy Australia and ESAA submissions to the first interim report, summarised in appendix B.

142 Frontier Economics, *Policy responses to mitigate the risk of financial contagion in the NEM*, July 2014, p16.

conditions under which it would be supplied, and by whom, if it became affected by a ROLR event;

- large customers might be able to negotiate more favourable terms in advance than those they could negotiate once their retailer has been affected by a ROLR event. Nonetheless, the proposed one week period of grace following a ROLR event provides flexibility to very large customers who do not negotiate a back-up retailer before a ROLR event occurs, enabling them to negotiate a back-up retailer in the week after a ROLR event without the inconvenience of their retail supply being interrupted;
- by reducing the size of the customer load that is transferred to the designated ROLR, this recommendation would reduce the additional credit support required by the designated ROLR, as well as their energy purchase costs. Although under current arrangements the ROLR can charge 'fair and reasonable' terms and conditions to large customers, the ROLR could still face cash flow challenges if its energy purchase costs increase dramatically, and there is a delay before it can recover those costs. Furthermore, it is still required to provide credit support to AEMO in relation to the energy consumed by large customers.

We have excluded sensitive loads from the proposed definition of 'very large customer' so that they would be protected from disconnection and their services would continue to be supplied. These customers would continue to be defined as 'large customers' (consistent with current arrangements), so they would have the option to opt out of the normal ROLR arrangements and reach agreement with a retailer (the 'nominated retailer') to become their retailer if a ROLR event occurs. They might still benefit from 'insuring' themselves by putting in place a contract for a back-up retailer, which could provide more certainty about their terms and conditions of supply following a ROLR event. If they have not nominated an alternative retailer, these sensitive loads would be transferred to the designated ROLR under the ROLR scheme.

In light of Frontier's comments regarding the potential disadvantages of applying this policy to a large number of customers, we propose a high consumption threshold that involves a relatively small number of customers in total, but still offers significant potential benefits to the designated ROLR in terms of their financial obligations. Data from AEMO suggest there are less than 1,000 connection points with annual consumption of 10GWh or more, and that these connection points account for 15 per cent to 20 per cent of total NEM demand. Removing the obligation on designated ROLRs to supply very large customers could reduce their financial obligations substantially. At the same time, the administrative and operational burden involved would be manageable given the relatively small number of customers involved.

While Frontier suggested that large customers would be likely to choose another large retailer as their back-up retailer, we do not think this should be assumed. Very large customers could negotiate a back-up retailer agreement with smaller retailers, or with generators who also retail to larger customers. Furthermore, other retailers would not be *obligated* to contract with a very large customer to provide back-up retailer services. They could assess whether they could manage the obligations imposed by serving the very large customer in addition to meeting their other obligations (including any obligations they may have as a default ROLR).

The threshold proposed of 10GWh per annum at a single connection point is equivalent to an energy bill of around $1 million per annum. Customers with energy costs of this magnitude are large, energy-intensive businesses, which are likely to have significant influence in negotiating a back-up retailer. The Commission considers that customers of this size should be responsible for managing the risk that their retailer is subject to a ROLR event, by either arranging a back-up retailer before the event as a form of insurance, or by being exposed to the consequences of not having a pre-arranged back-up retailer. These consequences include the potential to be charged spot prices (plus a margin) during the one week 'period of grace', as well as potential disconnection if they do not arrange a back-up retailer within the one week period of grace.

Under this arrangement the back-up retailer would be required to take financial responsibility for the relevant connection point from the transfer date and may be unhedged for the load in this period. This is likely to affect the price they offer to the customer.

The one week period of grace does introduce some uncertainty about who bears the risk for energy purchases during this period in the event that a very large customer is disconnected. Before the proposal is implemented, further analysis is required of:

- the magnitude of this potential risk; and
- how this risk would be managed.

The proposed arrangements would need to specify how directions for disconnection are given to the relevant distributor (and who would give them) as, generally, rights of disconnection are set out in the customer's retail contract. This would require consideration of how these arrangements would work alongside the current provisions that allow for disconnection of loads (eg, disconnection of a participant's load following suspension from the market under section 63 of the NEL). Further analysis is required regarding the practicalities of disconnecting very large customers, and the time required for this to take effect. The final recommendation regarding the number of days allowed as a period of grace may need to be adjusted in light of the time required to disconnect very large customers.

The status of customer contracts would also need to be considered in developing the detailed implementation guidelines. For example, whether customer contracts are terminated by force of law on disconnection or whether the customer would be required to terminate them in accordance with the terms and conditions of their contract.

8.6 Delay in AEMO credit support requirements

Overview of draft recommendation

The Commission recommends that the increased credit support required to be provided by the designated ROLR to AEMO for the energy volumes of the acquired customers:

- be waived for one week, and
- then ramped up over the following four weeks.

8.6.1 Overview of current arrangements

Retailers settle their accounts with AEMO approximately four weeks after the end of the week in which the electricity was supplied. This gives rise to credit risk, because if a retailer fails to pay for the energy consumed, a shortfall will arise between AEMO's incoming payments and its outgoing payments to generators.[143] This shortfall could be equal to the retailer's outstandings during that four week period, plus any spot market purchases during the AEMO reaction period of up to 7 days.

If a retailer fails to pay an invoice from AEMO on its due date, the NEM is also exposed to a further period of credit risk between the due date for the invoice and the date on which the retailer is suspended and ceases to accrue liabilities for energy purchased. This additional period could be up to seven days.

To address these risks, retailers are required to post credit support to AEMO when they are unable to meet the acceptable credit criteria.[144] This was covered in section 2.2.1 at a high level, but explained in more detail in this section. The credit criteria include the requirement that the entity be either:

- any entity under the prudential supervision of APRA; or
- a central borrowing authority of an Australian State or Territory which has been established by an Act of Parliament of the State or Territory.[145]

With the exception of Macquarie Bank, these criteria are not currently met by any electricity retailers in the NEM, so in practice retailers typically need to post credit support up to a pre-determined value, the MCL. The MCL is calculated so that the probability of the market 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%.[146] The MCL is equal to the sum of the outstandings limit (OSL) and the prudential margin (PM), where:

143 Note that under the NER, a payment shortfall from retailers will result in AEMO short-paying generators rather than taking any loss itself

144 NER, clause 3.3.

145 NER, clause 3.3.3(a).

146 NER , clauses 3.3.2 to 3.3.5. See Frontier Economics, *Policy responses to mitigate the risk of financial contagion in the NEM,* July 2014, pp28-29.

- the OSL is AEMO's estimate of the maximum value that a participant's outstandings can reach over the payment period of 35 days; and
- the PM is an amount designed to cover the value of spot purchases accruing between when a retailer fails to pay an invoice and the date AEMO suspends the retailer, equal to 7 days.

AEMO can change a participant's prudential settings at any time with notice of one business day.[147] Any changes that result in an increased MCL require the participant to increase its level of credit support by no later than the effective date of the MCL. If the retailer fails to provide this increased credit support by the relevant time[148], this constitutes a default event. AEMO may then issue a default notice on the participant. If this is not rectified by 1pm the following day (or a later deadline agreed to in writing by AEMO), then AEMO may issue a suspension notice, under which AEMO notifies the market participant of the date and time from which it is suspended from trading, and the extent of that suspension.[149]

In addition, market participants are each required to ensure their outstandings stay within their respective trading limits. The trading limit is the difference between the total amount of credit support a market participant has provided to AEMO, and its prudential margin.[150]

Since the ROLR acquires responsibility for the acquired customers from the time of the transfer date specified in the ROLR notice[151], its outstandings to AEMO will increase over the following month as energy is consumed. Nonetheless, it is required to post credit support for the full MCL when notified by AEMO, which could be immediately, or up to a week after acquiring the additional customers.

8.6.2 Draft recommendation

The NER would be amended to insert a minimum time before AEMO can require increased credit support from the designated ROLR as a result of its increased customer load. There would be a one week 'period of grace' in relation to credit support requirements following a ROLR event, following which the required credit support would be increased in increments over a period of four weeks until it reaches the level that fully reflects the additional load of the customers from the ROLR event. This would more closely reflect the ROLR's increase in outstandings over this time as energy is consumed and its obligations to pay AEMO increase.

147 NER, Clause 3.3.8(m).

148 AEMO's current prudential monitoring process allows credit support to be delivered by 10.30am Sydney time on the MCL effective date

149 NER, clause 3.15.21(c).

150 NER, clause 3.3.10.

151 NERL, section 140.

8.6.3 Stakeholder submissions

Stakeholder submissions to the first interim report largely supported the recommended changes to AEMO's credit support requirements, noting that the need to provide credit support is a key driver of the risk of financial contagion.[152] AGL also suggested that it was a proportionate response, minimised the regulatory burden, minimised the potential for moral hazard, and would increase the likelihood that market participants would offer to be a ROLR.

Energy Australia noted that the ramp up of credit support obligations should be carefully designed to ensure settlement credit quality is not significantly reduced, with a consequent transfer of risk to generation. Alinta supported further work on the proposal, on the basis that there were strict limits on the amount of exposure accruing to generators, together with a pass-through mechanism to cap the exposure of generators to any short-payment.

AEMO agreed that this recommendation, if implemented carefully, could provide some mitigation of financial contagion risk. AEMO suggested some changes to the way in which it would be implemented, including a threshold (to avoid triggering the provision where there is minimal risk of financial contagion), and some clarification to the recommendation for a 'period of grace'. AEMO suggested that it would still issue a call notice if the ROLR's outstandings exceeded its trading limit, but the degree of relief provided to the ROLR would be controlled by the policy settings in the Rules rather than being uncapped.

8.6.4 Commission considerations and conclusions

If the increase in credit support required by AEMO is substantial, it is possible that an otherwise solvent retailer could fail to meet these obligations in the time currently allowed. Should that occur, AEMO would be entitled to issue the designated ROLR with a default notice on the same day.[153] If the default event is not remedied by 1pm the next day (or any later deadline agreed to in writing by AEMO), AEMO may issue a suspension notice.[154] Suspension would constitute a second ROLR event[155], and potentially have a cascading effect in which retailers are progressively suspended after being designated as ROLRs, leading to financial contagion and instability in the NEM.

Precise information about the current level of the credit support for different retailers in the NEM is not publicly available, given the confidentiality of retail market shares. Some estimates are discussed in more detail in chapter 3, and in the Frontier Economics report.[156]

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152 A summary of submissions to the first interim report is available in appendix B. Individual submissions are available on the AEMC website at www.aemc.gov.au/Markets-Reviews-Advice/NEM-financial-market-resilience.

153 NER, clause 3.15.21(b).

154 NER, clause 3.15.21(c).

155 NERL, section 122.

156 Frontier Economics, *Policy responses to mitigate the risk of financial contagion in the NEM,* July 2014, pp31-33.

This analysis suggests that the additional credit support the ROLR must provide to AEMO could be from $98 million to $1 billion, depending on assumptions about spot market prices, the market share of the failing retailer, and whether ROLR customers are all transferred to one ROLR, or split between a number of ROLRs.

The proposed changes to credit support requirements over a transitional period are a balance between two factors:

1. on the one hand, allowing the designated ROLR to take up its new customers without having to bear the immediate risk or cost of sharply increased credit support requirements, thereby reducing the likelihood of cascading retailer failure; and
2. on the other hand, decreasing the amount of collateral held by AEMO and raising the possibility that, if the designated ROLR collapsed and was unable to pay AEMO, generators may be short-paid.

The Commission asked Frontier Economics to consider an option to delay the requirement for credit support for a longer period of up to three months. Frontier Economics recommended that the ROLR's obligations to provide increased credit support to AEMO should not be extended further beyond the period recommended in the first interim report, on the basis that a substantial increase in credit support could typically be obtained relatively quickly.[157]

Given this analysis and the submissions from stakeholders, the Commission recommends changes to credit support arrangements should not be extended beyond the five week period recommended.

The Commission notes the submission by AEMO regarding the precise form of the mechanism, and we recommend that the proposal be further refined in consultation with AEMO before it is implemented.

8.7 Delay in additional DNSP credit support requirements

Overview of draft recommendation

The Commission recommends that any requirement for the ROLR to provide increased credit support to DNSPs following a ROLR event be deferred for five weeks.

8.7.1 Overview of the current arrangements

The NER sets out a formula for calculating the amount of credit support a retailer is required to provide a DNSP.[158] An individual unsecured credit limit is computed for each retailer, which represents the maximum network charges that can accrue to the retailer before the retailer is required to provide credit support. The individual unsecured credit limit is dependent on the retailer's credit rating, and the maximum unsecured credit allowance for the DNSP - it is fixed *irrespective of the size of the retailer*, in

157 Ibid, p34.

158 NER, Chapter 6B, Part B.

terms of the number or size/consumption of its customers. This means that a retailer with a small number of customers is entitled to the same individual unsecured credit support limit as a retailer of the same credit rating with a much larger number of customers.

As noted by Frontier Economics, "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".[159]As a result, a very large increase in a retailer's market share as a result of a ROLR event could lead to a disproportionately large increase in its DNSP credit support obligations.

The requirement for ROLRs to post additional credit support to DNSPs must be met within 10 business days of the request.[160]

8.7.2 Draft recommendation

The NER would be amended to insert a minimum time of five weeks before DNSPs can require increased credit support from the designated ROLR as a result of its increased customer load.

8.7.3 Stakeholder submissions

In submissions to the first options paper, Ausgrid and the ENA voiced concern about the increase in risk this option would impose on DNSPs if a large retailer failed.

AGL and Energy Australia supported the delay in DNSP credit support requirements as it would assist the ROLR and DNSPs could absorb some costs if they have access to secure timely cost recovery.

8.7.4 Commission considerations and conclusions

In addition to the potential difficulty in obtaining additional credit support required by AEMO, the ROLR may also be required to obtain additional credit support for DNSPs. If the increase in credit support required by DNSPs is substantial, it is possible that an otherwise solvent retailer could fail to meet these obligations in the time currently allowed.

The first interim report did not recommend a temporary waiver of credit support requirements to DNSPs, citing that the increase in DNSP credit support is not as great as that required by AEMO, and nor is it required as quickly as AEMO. However, we have revised this draft recommendation in light of further analysis undertaken by Frontier Economics.[161] Frontier's report calculated the increase in DNSP credit support required under a number of retail failure scenarios.

This analysis shows that DNSP credit support requirements increase disproportionately for retailers with progressively larger market shares. Under differing assumptions

159 Frontier Economics, *Policy responses to mitigate the risk of financial contagion in the NEM*, July 2014. p20.

160 NER 6B.B4.1(b)(2).

161 Frontier Economics, *Policy responses to mitigate the risk of financial contagion in the NEM*, July 2014. pp19-27.

about market shares before and after the ROLR event, a ROLR could be required to provide additional credit support of between $186m to $536m.[162]

While this additional credit support would not be required as quickly as the ROLR's current credit support obligations to AEMO, it may nonetheless remain a significant challenge, given the potential magnitude of the additional credit support required.

We note that if a large retailer failed, the total level of credit support provided to DNSPs in the NEM would increase in many circumstances. This is due to the formula used to calculate the credit support, which requires retailers with larger market share to provide a disproportionate amount of credit support. We also note that:

- in the event of a large retailer failure, the increase in a ROLR's DNSP credit support could be substantial. A key question is whether the DNSP credit support obligations increase the likelihood of the ROLR failing and hence make financial contagion more likely;
- 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, because the formula used to calculate DNSP credit support favours small retailers;
- 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 as the consumption of the transferred customers accumulated following the transfer.

This analysis is consistent with the analysis undertaken by Frontier Economics.

Where the ROLR event involves a small retailer, the impact of this recommendation is likely to be minimal. Where the ROLR event involves a large retailer, this recommendation reflects a better sharing of risk at times of stress in the NEM, enabling the shock of retailer failure to be more readily absorbed by the market as a whole and mitigating the risk of financial contagion.

Given these factors, we recommend a temporary waiver of the requirement for the ROLR to provide DNSPs with additional credit support in relation to the acquired customers. We recommend this period be five weeks, which is consistent with the period of time we have recommended that AEMO credit support provisions should be amended.

162 Ibid, pp24-25.

8.8 Improvements to information and systems

Overview of draft recommendation

The Commission recommends that AEMO and the AER continue to investigate the scope for further improvements to ROLR processes, including ensuring that updated standardised customer data is available, and that systems are capable of efficiently transferring customers to new retailers if a ROLR event occurs.

8.8.1 Stakeholder submissions

Origin Energy's submission to the first options paper noted that the ROLR's ability to efficiently absorb customers will be improved if it has access to standardised customer information. Origin also noted that gas retailers must provide AEMO with an updated data file with customer information each month, which is not required in the electricity sector.[163] There is no central repository for customer information in the NEM, which relies on "B2B" (business to business) transfer of customer information between retailers and distributors.

In its submission to the first interim report, the AER strongly supported the need for standardised and up-to-date customer data information as well as an efficient transfer process capable of moving large numbers of customers in a short period of time. The ENA also supported operational refinements to the ROLR arrangements including improving the timeliness of establishing new customers' contracting arrangements.

AEMO agreed that there is potential for improvement to customer information, and that the current approach of relying on distribution businesses to maintain customer information has not proven reliable to date. AEMO notes there is a range of issues associated with the ownership of and access to customer data, and AEMO proposes to address the issue initially with its Retail Market Leaders Forum, a consultative industry working group.[164]

Energy Australia suggested care should be taken to ensure that there are not significant system change costs to industry. Similarly, Alinta suggested that care should be taken that additional customer transfer requirements do not become a reporting burden rather than a benefit.

8.8.2 Commission considerations and conclusions

The designated ROLR takes on a range of obligations and risks when it is appointed. It must act quickly to arrange additional credit support and put hedges in place so that it is not fully exposed to the spot price in relation to its new customer load. Its ability to negotiate appropriate hedge contracts will depend on its knowledge of the characteristics of the customer load it is acquiring, including the level and pattern of demand. The challenges faced by the designated ROLR are greater if the failed retailer was large, as a large number of customers will be transferred to the designated ROLR(s).

163 Origin submission to options paper, p9.

164 See http://www.aemo.com.au/About-the-Industry/Working-Groups.

Even though there is likely to be long term value in acquiring the additional customers, the immediate challenges faced by the ROLR give rise to significant risk. These risks would be reduced if there is an efficient information and transfer process. This would enable the designated ROLR to assess quickly the characteristics of the customers it has acquired, import the new customers into its internal customer databases, and begin communicating with and billing its new customers.

The smooth transfer of customers to the designated ROLR would also depend on the extent to which AEMO's systems can transfer a large number of customers in a short period of time.

The availability of improved customer information would also assist the AER in its task of deciding which retailer(s) to appoint as designated ROLR(s). This would allow the AER to provide information to potential ROLRs in any auction process. It would also provide better information for the AER in determining which retailer(s) are best placed to manage the obligations imposed by acquiring additional customers.

8.9 Temporary market price cap or partial deferred settlement

The Commission also considered options to introduce a temporary market price cap (MPC) or to partially defer settlement for energy purchases relating to ROLR customers, as described below. The Commission has **not** recommended these options. This section provides a description of the options considered and the Commission's reasoning in not recommending them.

8.9.1 Overview of the current arrangements

Prices in the wholesale spot market can vary from a floor of -$1,000/MWh to a MPC of $13,100/MWh, depending on demand and supply conditions. In addition, there is a cumulative price threshold (CPT) which is currently set at $197,100.[165] If the sum of spot prices in a region over 336 consecutive half-hourly trading intervals (ie, seven days) exceeds the CPT, an administered price cap of $300/MWh will be applied in that region for as long as the CPT is exceeded.[166]

Currently, the ROLR arrangements do not include any provisions to vary the normal wholesale spot market price or settlement outcomes.

8.9.2 Description of options considered

During the first stage of the review, the Commission considered two related options:

1. introducing a temporary cap on spot market prices following a large retailer failure and associated ROLR event. The Commission did not recommend this option, noting in the first interim report that while a spot market cap would have

165 This is the level set for 2013/2014 - see www.aemc.gov.au/Australias-Energy-Market/Market-Legislation/Electricity-Guidelines-and-Standards/Schedule-of-Reliability-Settings-(MPC-and-CPT-(1)/Schedule_of_reliability_settings_(MPC_and_CPT_for_

166 NER, clause 3.14. The current level of the administered price cap is set out in http://www.aemc.gov.au/getattachment/26197d74-b62c-479d-8bd9-4351216023f1/Schedule-for-the-Administered-Price-Cap.aspx

the benefit of capping financial obligations, it would represent a major change to market design, and would have a wide-reaching impact on businesses not immediately affected by the ROLR event.[167]

2. delaying the settlement period for the designated ROLR to pay AEMO for energy. The Commission did not recommend this option due to concern that the existing settlement cycle may make this type of mechanism of little marginal benefit. The designated ROLR already has four weeks to pay for the energy consumed by the acquired customers. This provides an opportunity for the ROLR to organise finance as required.

During the second stage of the review, the Commission asked Frontier Economics to reconsider the option of imposing a temporary MPC following a ROLR event. Frontier also suggested an alternative option, where for a transitional period after a ROLR event:

- wholesale spot market settlement occurs as normal for prices occurring up to a given price (which they suggest could be $600/MWh); and
- where spot market prices exceed $600/MWh, settlements attributable to ROLR electricity purchases at prices above $600/MWh are settled at a later time, when the ROLR(s) have been able to recover their increased energy purchase costs.[168]

8.9.3 Stakeholder submissions

In submissions on the two options put forward in the first options paper:

- industry stakeholders did not support the option of a temporary lowering of the MPC following a ROLR event. They cited the complexity of its implementation, the transfer of risk to generators, and the distortion of investment incentives.[169]
- The AER submitted that the option of lowering the MPC should be considered further, because it would assist in ensuring the scale of the problem did not escalate rapidly. They also suggested that if properly formulated, it would have negligible distortionary impacts and would not affect incentives to invest.
- most submissions did not support a delayed settlement period for the ROLR to pay AEMO. They argued that it would have limited benefit; transfer costs and risk to generators; be complex to administer; and could exacerbate the risk of contagion by short paying generators.

8.9.4 Analysis by Frontier Economics

Frontier Economics noted that temporarily reducing the MPC or the CPT following a ROLR event would provide the following benefits:

- directly reducing a ROLR's exposure to high wholesale electricity purchase costs;

167 First interim report, p98.

168 Frontier Economics, *Policy responses to mitigate the risk of financial contagion in the NEM*, July 2014 pp42-50.

169 A summary of submissions to the first options paper is provided in appendix A of the first interim report. The submissions are available on the AEMC website at www.aemc.gov.au/Markets-Reviews-Advice/NEM-financial-market-resilience.

- indirectly reducing 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 reducing the credit support a ROLR is required to provide to AEMO, by influencing the prudential settings that apply to market participants.[170]

Furthermore, Frontier pointed out that if reducing the market price cap could prevent 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".[171]

However, Frontier Economics did not recommend a reduced MPC and/or a reduction in the CPT because:

- it could reduce incentives on the margin for retailers to enter derivatives, acting as a moral hazard that could perversely increase the risks of a large retailer failure;
- it could discourage some peaking generators from offering all their potential power output during periods when the market price cap is in place - particularly if the cap was set below their short-run marginal costs; and
- it would harm incentives to invest in new generation and maintenance of existing generation and may ultimately jeopardise the NEM reliability standard.

In particular, Frontier suggested that lowering the MPC "would undermine the integrity of the signals provided by the NEM reliability settings and encourage investors to not respond to high expected wholesale prices".[172]

Frontier Economics suggested an alternative option could be considered, where settlements are partially deferred as described in section 8.10.2 above. They suggest that this option would "seek to achieve the financial stability advantages of lowering the MPC without harming the investment incentives provided by allowing the spot price to reach the current MPC".[173]

Frontier noted that one of the main drawbacks of this option is that generators would have their settlement revenue partially deferred, but would still need to make payments under financial hedge contracts, both OTC and ASX-traded.

In terms of the impact on generators, Frontier's modelling showed that the hypothetical generator considered received more spot revenue than the difference payments it was required to make. Nonetheless, they noted that the generator's spot receipts would also need to fund fuel and other variable operating and maintenance costs.

170 Frontier Economics, *Policy responses to mitigate the risk of financial contagion in the NEM*, July 2014, p37.

171 Ibid, p37.

172 Frontier Economics, *Policy responses to mitigate the risk of financial contagion in the NEM*, July 2014, p42.

173 Ibid, p43.

8.9.5 Commission considerations and conclusions

The Commission has considered the advantages and disadvantages of a reduced MPC as outlined in submissions to the first options paper, and in the assessment by Frontier Economics. We do not support the introduction of a reduced MPC, which could reduce the incentive for investment in generation, and the incentive for some generators to offer supply into the spot market. This could lead to electricity supply shortages in both the short and long run, as noted by Frontier Economics.

Relative to a reduced MPC, the partial deferral of settlements relating to ROLR customer load during high priced periods is better targeted to the objective of reducing the financial stress felt by the ROLR in the period immediately following the ROLR event, and diminishes the potential harm a reduced MPC may cause for incentives to invest in generation.

However, we have not recommended this option as it has significant drawbacks. It transfers the cash flow risk from the ROLR(s) to generators dispatching during a high priced period. While generators will have their revenue partially deferred, they will still be required to settle payments under both OTC and ASX-traded hedge contracts as normal.

Furthermore, the implementation of this option is likely to be complex as a result of the changes that would be required to AEMO's settlement procedures.

8.10 Assessment against the national electricity objective

Relative to the current arrangements, the changes proposed in this chapter would enable the ROLR scheme to operate effectively in a broader set of circumstances, without exacerbating the risk to financial system stability in the NEM. The proposed changes would achieve this by reducing the financial obligations imposed on the ROLR following appointment, or by providing more time for those obligations to be met. In a number of the recommendations, we propose temporarily reducing the risk borne by the ROLR(s) and sharing that risk collectively across a larger number of market participants. We have effectively proposed diversifying the risk in order to minimise the risk of financial instability, without unduly imposing material costs on any one group of market participant.

In our view, this is a proportionate and balanced response to the problem that is consistent with a more efficient utilisation of capital in the industry. It may mean that alternative stability arrangements - to be triggered when the ROLR scheme may not be the best response - would apply to a narrower set of circumstances.

Furthermore, the development of stability arrangements would take a significant period of time and would involve a package of legislative changes to various legislation, including corporate and energy legislation. The changes to the ROLR scheme proposed in this chapter could be implemented more easily, reducing sooner the risk of contagion following a ROLR event.

8.11 Consultation questions

The Commission invites submissions on the issues and draft recommendations contained in this chapter, including the following issues.

Question 3 Changes to the ROLR scheme

3.1 What do you see as the primary costs and benefits of each draft recommendation?

3.2 In implementing the recommendation to delay designation of the ROLR, what is your view on the best approach and timing of the AER's notices to communicate the ROLR event and designated ROLR to market participants and consumers?

3.3 The Commission has made two new recommendations in this chapter that were not contained in the first interim report:

(a) delaying any additional credit support requirements the ROLR may be required to provide to DNSPs as a consequence of acquiring ROLR customers; and

(b) limiting the extent to which ROLR arrangements apply to very large customers.

Do you have any views on the Commission's analysis or recommendations in relation to these proposals? In particular, is 10GWh per annum at a single connection point an appropriate threshold to define a very large customer?

9 Market suspension under the National Electricity Rules

The current NER give rise to uncertainty as to whether a generator could remain operating in the market if it is part of a retail group that was suspended, or is itself in administration. It could however be beneficial for reasons of financial or physical market stability to allow the generation assets to remain operating in the market in such a situation.

We recommend that the NER be clarified to allow the possibility of not suspending a participant, or parts of its activities, from the market when it is under external administration. To minimise the risks to the market and other participants, this should only occur provided a number of conditions are met.

This chapter contains our considerations and recommendations for amending the NER to allow for the possibility of allowing a participant under external administration to keep participating in the market.

Our recommendations in this area could apply to both a SIMP and a non-SIMP failure, and both to situations where a participant failure is managed under the ROLR scheme or under alternative stability arrangements.

9.1 Introduction

In its submission to the options paper, AEMO raised concerns about the implications for the NEM of a retailer failing when it is part of a vertically-integrated business that also operates as a generator in the NEM. As AEMO stated, "the process of ROLR is only designed to manage the transfer of retail customers, and there is no mechanism in the NEM for ongoing operation of the generation when a business is insolvent."[174]

9.2 Current arrangements

If a 'default event' has occurred in respect of a participant, the NER provide AEMO with some discretion as to whether or not to suspend that participant, or parts of its activities, from the market.[175] The NER also state that, if AEMO issues a suspension notice in respect of a participant that has defaulted, AEMO must specify 'the extent of that suspension'. AEMO must also issue a public announcement of that the participant has been suspended, including details of 'the extent of the suspension'.[176] The 'extent of the suspension' could cover only certain activities of the failed participant, effectively keeping the other activities of the failed participant in the market.

The NER also prescribe that a participant may only participate in the market if that participant satisfies the relevant prudential requirements set out in chapter 3 of the NER.[177] This includes that each participant must, while operating in the market, not be

174 Submission by AEMO to the stage one options paper, 20 March 2013.

175 NER, clause 3.21.15 (c).

176 NER, clause 3.21.15 (f).

177 NER, clause 2.4.1.

under external administration (as defined in the Corporations Act) or under a similar form of administration under any laws applicable to it in any jurisdiction.[178]

As mentioned in section 5.4, it is unclear from the relationship between these provisions what scope the current rules allow for maintaining a participant, or parts of its activities, in the market once it has gone into external administration. This is especially the case if the defaulting participant is a vertically integrated market participant, with significant generation assets besides its retail activities.

9.3 Stakeholder submissions

In response to the first interim report, the AER agreed that the framework designed to mitigate the risk of financial contagion in the NEM must deal explicitly with any generation operated by the failing business.[179]

In their submissions to the first interim report and stage two options paper, participants generally supported the possibility of the rules allowing generation activities of a participant operating in the market while it is under external administration.[180]

ESAA supported allowing the generation assets of a vertically integrated business to continue trading after the suspension of its retail arm. From ESAA perspective, any other approach would be counterproductive and against the objectives of the NEO, as suspending generation assets would worsen market conditions without any possible upside.[181]

The ESAA noted that allowing generation assets to keep trading would present no risk to AEMO, as generators receive payments from the wholesale market. Continuing to run generation assets under external administration, due to a retailer collapse, would also maximise the return to the creditors. Given generation assets would be producing income, especially under wholesale market conditions that would bring about the collapse of a large retailer, an administrator would invariably continue to operate them.[182]

The NGF recognised the benefits of allowing the generation elements of a business with a failed retailer to continue to operate. For example, a single large retailer may own a material component of the generation supply in a NEM region. Allowing the generation component to continue to operate would provide a necessary revenue stream to the business which would assist the failed retailer in meeting its obligations to creditors (existing insolvency driver) and limits the impacts to the wholesale electricity market (i.e. avoids major supply disruption), which is also in the interests of end-use customers.[183]

178 NER, clause 3.3.1 (b).

179 Submission by the AER to the first interim report, 15 July 2014, p5.

180 See, for example, submissions to the stage two options paper by Alinta Energy, 18 December 2013, p2; GDF Suez, 19 November 2013, p5; and InterGen, 19 December 2013, p3.

181 Submission by the ESAA to the first interim report, 12 July 2013, p4.

182 Ibid.

183 Submission by the NGF to the first interim report, 12 July 2013, p5.

Alinta considered that there is no obvious reason why a generator, providing credit, should be suspended and the action of doing so does not seem to provide any protections to the NEM.[184] The ENA noted it is supportive of frameworks which may allow a generator to continue operating for a limited period while in administration, as a practical way of ensuring continuity of supply.[185]

Origin agreed that the possibility of loss of a gentailer's generation due to suspension as a result of a failed retail-arm poses a risk to the market. Origin noted that, under the NER, each connection point requires a Financially Responsible Market Participant, registered with AEMO as either a Market Customer or a Market Generator. A potential problem within the rules appears where neither the suspended retailer nor the administrator could act as the Financially Responsible Market Participant at the generator connection point.

Where a gap is identified in the rules between the suspension of a market participant, registration as a generator and external administration, Origin considered ways should be explored to ensure a Financially Responsible Market Participant is maintained over generation assets at a connection point. An option could be an amendment to the rules to enable the transfer of registration over the generation assets from the suspended vertically integrated retailer to the administrator. This could enable the dispatch of generation through having a Financially Responsible Market Participant at the generator connection point.[186]

9.4 Commission considerations and conclusions

As mentioned, we consider the current arrangements are not clear on the scope for allowing a participant, or parts thereof, to keep operating in the market while it is under external administration. We therefore consider the rules should be clarified on this point.

The possibility of not suspending a participant which is under external administration from the market should exist under the rules, for the following reasons:

- Suspending a participant from the market may impede any corporate rescuing initiatives that could be in the process of being explored around that time and may actually extract value from the failed company.
- Suspending the generation assets of a failed market participant may lead to security of supply concerns.
- It could be beneficial from the perspective of financial system stability in the NEM to keep the failing business, or part of the business, operating in the NEM.

We recognise there are also risks attached to the possibility of keeping a participant which has gone into external administration operating in the market:

- There could be a risk to the settlement process, if the ongoing spot market liabilities of the failed participant cannot, in some way, be funded. This could

184 Submission by Alinta Energy to the first interim report, 12 July 2014, p6.

185 Submission by the ENA to the first interim report, 12 July 2013, p2.

186 Submission by Origin to the first interim report, 12 July 2013, p7.

potentially lead to a shortfall in wholesale market settlement. This risk, and the magnitude thereof, would depend on the particular situation.

- It may be more difficult for the AER to enforce compliance with the rules in respect of a participant which has entered into external administration. For example, issuing an infringement notice seeking a financial penalty if the participant would fail to comply with the rules may not be effective. In such a situation, the AER may need to obtain special leave from the court to undertake legal action.
- There is no guarantee that the external administrator of the insolvent participant would conduct the market operations in a way that aligns with the SIMP response objective set out in chapter 6. For example, even though the possibility of trading while under external administration may be clarified under the rules, there is no certainty that the external administrator would choose to trade given that, under the Corporations Act, he or she would be personally liable. For the same reasons, the external administrator may choose not to comply with a direction by AEMO to maintain power output (see also section 5.4).

Given these risks, we consider that a participant under external administration, or parts thereof, should only be allowed to remain operating in the market if a number of conditions are met. These would include:

- the participant can continue its operation in the market (ie, there is sufficient level of staff and other technical, operational, and administrative resources available to run the business);
- the participant conducts its market behaviour in accordance with the rules;
- the participant agrees to comply with AEMO directions where needed; and
- a source of funding is available to meet any financial obligation arising in the wholesale market.

The rules should allow for further conditions to be imposed for each individual case, depending on the specific circumstances.

The proposed SIMP decision making framework set out in chapter 6, would establish that any relevant decisions relating to the operation of the SIMP in the NEM are elevated to a single decision making point at the level of government. Therefore the decision on whether to allow continued operation of a SIMP, or parts of the business, which has entered into external administration could be part of the decision on how to respond to a SIMP failure. This amendment would provide more flexibility on how to manage such a failure.

Further work is required on the conditions and application of this proposed amendment. We appreciate stakeholder views on what conditions the continued operation should be subject to. We also seek views on whether this possibility should be limited only to generation activities of a failed participant, or whether there may be situations where allowing the retail activities of a failed participant to temporarily continue could be beneficial for finding the appropriate solution to the participant failure.

9.5 Assessment against the national electricity objective

Permitting a participant, or parts thereof, to remain operating in the market while it is under external administration could be beneficial in two ways. These are, by helping to maintain the physical integrity of the system, and financial system stability in the NEM at times of stress. If designed appropriately, this would not increase costs on participants or expose them to additional risk in the circumstances. Not allowing the continued market operation of a participant which is under external administration could further aggravate the distress being experienced by the market at that time.

These recommendations would improve the way in which market arrangements could facilitate an appropriate response to a participant failure.

For these reasons, we consider that our recommendations in this chapter would meet the NEO.

9.6 Consultation questions

The Commission is interested to receive stakeholder views on the following consultation questions.

Question 4 Partial suspension

What conditions should apply when allowing a participant to continue operating in the market while it is under external administration?

10 Risk management and transparency measures

This review has identified OTC contracts as a potential source of financial instability in the NEM, via the possibility of counterparty default. Currently, the main mechanisms to mitigate the risk of counterparty default are the risk management practices adopted by participants.

We have considered additional regulatory measures that seek to reduce the probability of financial contagion through counterparty failures by identifying and mitigating risks in advance. These measures include a prudential regulatory regime for the electricity sector, a mandatory code of practice, a mandatory stress testing regime and increased transparency measures. These measures all involve additional obligations being imposed on participants. They are common features of financial sector regulation.

Currently, the case is not established for mandating such additional measures in the NEM for the following reasons:

- introducing such measures would require substantial resources and expertise to be effective. The costs of doing so would likely to outweigh the potential benefit of reducing risk in the NEM;
- the nature and magnitude of risks to system stability in the electricity sector differ from those in the financial sector; and
- the measures would not address the key channel where contagion is most likely to be transmitted in the NEM - through the ROLR scheme.

As reflected in previous chapters, attention should be focussed on improving how market arrangements manage and respond to a failure of a large participant.

This chapter considers whether any additional regulatory measures to identify and mitigate risks to financial system stability in the NEM in advance of a failure should be implemented. The measures being considered relate to how participants manage the risks associated with operating in the NEM and seek to protect themselves from financial failure.

10.1 Introduction

Participants' internal risk management practices - ie, documentation of procedures and policies, as well as how these procedures and policies are applied in practice - determine how participants manage the risk of OTC counterparty default and their ability to absorb financial shocks. Accordingly, strong internal risk management practices can indirectly help minimise the risks of financial contagion and hence threats to financial system stability occurring in the NEM.

In chapter 4 we concluded that participants' risk management practices cannot, however, be relied upon, or expected, to eliminate all risk to financial system stability in the NEM. Such practices can only reduce the probability of a default occurring, and we have taken this into account when assessing any additional measures that seek to identify and mitigate risks to financial system stability in the NEM in advance. The

Commission consulted on these measures in the stage two options paper, published in November 2013.

The measures span three broad areas:

- prudential regulation;
- risk management obligations; and
- transparency requirements.

Some of these areas are also covered by the G20 recommendations for reforms to the OTC derivatives market. The Commission's advice regarding the potential application of the G20 measures in the context of the NEM is set out separately in chapter 11.

This chapter contains the Commission's considerations and draft conclusions regarding:

- prudential regulation in the electricity sector;
- a mandatory code of best practice;
- a mandatory stress testing regime; and
- transparency requirements other than transaction level reporting of OTC trades as envisaged under the G20 recommendations.

These measures are not mutually exclusive.

Relevant considerations

We have assessed the proposed measures against the NEO and the assessment framework set out in chapter 1. In particular, we have considered:

- the effectiveness of the measures in contributing to a reduction of risks to financial system stability, given the existing information on the standard of risk management in the NEM;
- the costs of introducing a measure compared with benefits of the measure. This includes implementation and ongoing compliance costs, both direct and indirect; and
- the effects of the measure on overall risk management incentives. The measures must not have the effect of moving risk from one part of a business to another, or remove participants' commercial incentive or ability to manage their own risks. In other words, the measure would need to address the problem without creating others.

To be recommended, a measure would have to be effective without introducing overly costly or burdensome regulations on participants. We have also considered whether information available to relevant stakeholders about risks in the market and the arrangements that participants have in place to manage those risks could be increased.

10.2 Prudential regulation in the electricity sector

Overview of draft conclusion

Based upon current information, the Commission does not consider that a case has been made to introduce prudential regulation for the electricity market at the present time. Such a regime would not be proportionate to the size of, and the nature of risks to financial system stability in, the NEM.

10.2.1 Description of the measure

Powers exist under the current regulatory framework to intervene in the electricity market to maintain power system security. There is not, however, a regulatory body similar to APRA in the financial sector that has the power to intervene in order to mitigate risks to financial system stability in the NEM.

The stage two options paper contained an option of establishing a prudential regulator for the NEM financial market, with a data collection regime to support its functions. This option involved conferring certain powers on that regulator to preserve financial stability, such as by:

- directing participants to limit or contain their derivative exposures to other counterparties;
- assessing how risk management is being applied;
- directing participants to strengthen their balance sheets.

10.2.2 Stakeholder submissions

In their submissions, participants expressed opposition to a prudential regulator.[187] Their main arguments were:

- existing ASIC powers regarding financial services licensing are sufficient;[188]
- additional supervisory and regulatory powers would be disproportionate to the low risk of financial contagion;[189]
- introducing additional prudential regulatory powers would increase participant costs, create barriers to entry and reduce innovation and competition to the detriment of consumers;[190]
- a regulator would not be in a better position than professional traders and risk managers to make judgements about acceptable levels of risk. Involvement of a

187 A summary of the stakeholder submissions to the stage two options paper is included as appendix C. The submissions to the stage two options paper can be found on the AEMC website via: http://www.aemc.gov.au/Markets-Reviews-Advice/NEM-financial-market-resilience

188 See for example submissions to the stage two options paper by AFMA, 20 December 2013, p11; AGL, 18 December 2013, p6; and Alinta Energy, 18 December 2013, p2.

189 Submission to the stage two options paper by Origin, 19 November 2013, p17.

190 Submissions to the stage two options paper by Alinta Energy, 18 December 2013, p4; and EnergyAustralia, 19 December 2013, p10.

prudential regulator in the day-to-day operations of businesses might become too intrusive;[191] and

- prudential regulation might create a problem of moral hazard if businesses started to rely on the regulator to intervene and solve the problems if they occur.[192]

The National Generators Forum (NGF) raised concerns that establishing prudential regulation could remove some of the commercial incentives on businesses to correctly manage their own risks and blur the lines of accountability for risk management within energy businesses.[193] The NGF also noted other potential consequences of introducing prudential regulation:[194]

- knowing that a regulator could intervene may lead other participants to change their risk management behaviour towards distressed participants, for example by terminating hedge contracts earlier than they may have otherwise done; or
- knowing that a regulator is playing an active role in supervising financial exposures and potentially performing risk management decisions for distressed participants could erroneously give investors the impression that the electricity market is a low risk market.

10.2.3 Commission considerations and conclusions

A prudential regulator for the NEM would monitor, identify, analyse and assess risk from a systemic perspective, rather than from the perspective of an individual business. It would be done on the basis of information about financial interdependencies between participants, and take appropriate mitigation action if the situation demanded it. By recognising the external effects arising from the behaviour of individual participants, as well as the structure of the overall market, a prudential regulator could help to safeguard the financial stability of the market as a whole.

Any prudential regime would need to be clearly defined and not aimed at preventing the normal exit of individual participants from the market so as to avoid moral hazard. Participants would continue to need to manage their own financial and commercial positions.

Developing a prudential framework and establishing a dedicated prudential regulatory oversight body for the NEM would, however, be a highly intrusive measure. It would place substantial regulatory compliance costs and burdens on participants. This could be exacerbated if the regulator tasked with the oversight function intervenes too heavy-handedly or becomes too involved in the management and commercial decisions of participants.

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191 Submissions to the stage two options paper by the Energy Retail Association of Australia, 19 December 2013, p2; ERM Power, 18 December 2013, p18; InterGen, 19 December 2013, p5; and Origin, 19 November 2013, p17.

192 Submissions to the stage two options paper by EnergyAustralia, 19 December 2013, p10; ERM Power, 18 December 2013, p18; and NGF, 19 December 2013, appendix.

193 Submission to the stage two options paper by the NGF, 19 December 2013, appendix.

194 Ibid.

To be effective, a prudential regulator would require a range of legal powers and access to high quality information. Significant resourcing would also be necessary to enable the regulator to properly assess and process that information, and more generally to enable the regulator to exercise its powers adequately. Therefore this measure would impose a high cost on the industry, which could feed through to consumer prices.

Also of relevance in the electricity context is the size of the market and nature of risk in that market. The market for electricity derivatives is a relatively small part of the total financial market.[195] Although electricity businesses are the main traders in electricity derivatives[196], these businesses are nevertheless relatively small financial market players compared to banks and other financial institutions.

The size and nature of risks to financial system stability in the NEM compared to other non-commodity financial markets is also different. For example, natural participants in the NEM generally use derivative contracts to hedge against price volatility on the wholesale market. The Commission understands from discussions with industry that currently there is relatively little speculative trade compared to the financial sector.

Based upon current information, the Commission does not consider that a case has been made to introduce prudential regulation for the electricity market at the present time. Such a regime would create costs for consumers, and would not be proportionate to the size of , and the nature of risks to financial system stability in, the NEM.

10.3 Risk management obligations

In the absence of a prudential regulation measure, a possible approach to mitigating risks to financial system stability is to expand the risk management obligations placed on participants. The measures explored in this section seek to do this through building upon existing arrangements. This section covers:

1. a mandatory code of best practice; and
2. mandatory stress testing.

195 The annual turnover of the electricity financial markets is A$ 633 billion, of a total turnover of the financial markets of about A$ 135 trillion. Source: AFMA, *2013 Australian Financial Markets Report*.

196 About a quarter of the transactions is traded with a financial intermediary. Source: APRA, ASIC, RBA, *Report on the Australian OTC Derivatives Market*, October 2012, p38.

10.3.1 Code of best practice

Overview of draft conclusion

Currently the case has not been established for implementation of a mandatory code of practice.

However, there could be merit in the industry cooperating and developing a voluntary code or standards that provide guidance on appropriate risk management practices.

A mandatory code of best practice would be established by an external body. It would contain a range of risk management standards that would help to mitigate risks to financial system stability in the NEM. This would be achieved by providing a generic framework of principles and guidelines on risk management, thereby building upon existing risk management standards.[197] A code could take account of the specific characteristics of the electricity sector, such as the use of OTC contracts, and participants would have to regularly attest they comply with the code.

A code of best practice would have two main purposes:

- By participants signing up to the code, regulators and the broader public would be provided with a level of comfort that risk management practices in the NEM are maintained at, at least, a minimum level on the basis of the principles and standards set out in the code.
- By providing a benchmark for risk management practices, over time, the code could improve the financial resilience of some businesses which may not currently be operating at 'best practice' level.

Stakeholder submissions

In their submissions to the stage two options paper, participants generally rejected the option of introducing a code of best practice, for the following reasons:

- A code may not be able to cater for the diversity of participants, which may mean that it would result in a simplified, standard approach that would represent a less than optimum approach for many participants.[198]
- There is a risk that a code may be either too prescriptive or too vague. If it is too prescriptive, there is a risk that adhering to the code may limit the options of businesses to deal with any risks they face, thereby potentially increasing the risks. If it is too vague, it might be meaningless as a tool to enhance existing risk management practices.[199]

197 For example standards such as AS/NZS ISO31000-2009

198 Submissions to the stage two options paper by ERM Power, 18 December 2013, p17; GDF Suez, 19 November 2013, p6; and InterGen, 19 December 2013, p5.

199 Submissions to the stage two options paper by AGL, 18 December 2013, p6; and Alinta Energy, 18 December 2013, p4;

- An additional code of best practice is not necessary as the existing licensing and regulatory framework already ensures that participants adhere to best practice standards.[200]
- It is not clear how a code of best practice could co-exist with or enhance existing internal or external requirements. Participants are required to comply with conditions under their AFSL. As the relevant entity regulating AFSL holders, it could be expected that ASIC would be best placed to have an insight as to what represents industry best practice and where a deficiency in a business risk management practice is identified.[201]
- The preparation of end of year accounts consumes considerable resources and places great time pressure on business operations. At such a time, the insertion of an additional code of practice audit or certification requirement would further divert management attention from core business operations. Any additional reporting requirements under a code would add to the large overheads already borne by electricity businesses and translate into increased costs of electricity supply.[202]
- Once a code has been defined, regulators are likely to be asked whether the industry participants are following the best practice methods. The only way that a regulator could be sure that participants are following the code of best practice would be to carry out an audit. The regulator is then faced with the dilemma of what to do if a participant's audit reveals that it is not following the code of best practice.[203]

In its submission, Origin acknowledged that best practice guidelines may have some value but noted that a code would be unlikely to reduce the risk of contagion.[204] AFMA did not make any recommendations on this issue, but noted industry-led initiatives in developing and maintaining codes of best practice which have proven successful in the financial sector. It noted industry bodies like AFMA can facilitate the development and support for codes of best practice.[205]

ERM Power noted that a code could provide benefits to the businesses through the sharing of information and knowledge about risk management practices in the sector, and would support an industry-led, voluntary code if this could be viable, politically acceptable alternative.[206]

200 Submission to the stage two options paper by the NGF, 19 December 2013, appendix.

201 Submission to the stage two options paper by Origin, 19 November 2013, p16.

202 Submission to the stage two options paper by the NGF, 19 December 2013, appendix.

203 Submission to the stage two options paper by GDF Suez, 19 November 2013, p6.

204 Submission to the stage two options paper by Origin, 19 November 2013, p16.

205 Submission to the stage two options paper by AFMA, p11.

206 Submission to the stage two options paper by ERM Power, 18 December 2013, p16,17.

Commission considerations and conclusions

The ASIC review of risk management policies of Australian financial services licensed entities that trade in electricity OTC derivatives concluded that participants' risk management policies appeared to be appropriate to the nature, size and complexity of the financial services business being conducted.[207]

Based upon this current information, there may be limited benefit in imposing a mandatory code of best practice on the industry at present. Given the expected costs associated with developing and administering, as well as complying with, such a code, the Commission considers that its introduction, at this moment, would not create any additional benefit.

Consumers are exposed to the consequences of financial system instability in the NEM. Therefore, we continue to consider that it is important that participants continue to maintain public confidence in, and offer transparency regarding, the quality of their risk management practices. General financial reporting contributes to this, but there may be some merit in the industry providing more transparency and understanding on the standard of risk management practices adopted.

One alternative approach could be for the industry to cooperate and develop voluntary codes or standards that provide guidance on appropriate risk management practices.

Such industry-led initiatives have proven useful in other sectors and have been adopted in energy sectors in different countries. One overseas example is the Committee of Chief Risk Officers (CCRO), which is a platform for risk management best-practice sharing in the United States and Canadian energy industry. Further information on the CCRO is contained in Box 10.1.

Such a voluntary code could incorporate practices reflecting a level of specification over and above what is undertaken by participants to comply with existing licence and other obligations. It could also provide useful guidance for new entrants into the industry.

In developing such an initiative, participants could build upon the work of ASIC in its recent survey of risk management practices, which discussed appropriate practice. As part of this work, ASIC developed the Benchmark Electricity Risk Management Calculator model to review and compare, against a coherent set of metrics, the risk management practices of participants. This model could also be used as a self-assessment tool by an AFS licensee to measure its risk management policies and practices against its peers.

An industry-led approach is preferable to mandating compliance with a code. It would be less costly and builds upon existing risk management practices of participants.

207 ASIC, *Review of OTC electricity derivatives market participants risk management policies*, Report 390, April 2014

Box 10.1: Committee of Chief Risk Officers

The CCRO is an independent non-profit corporation of member companies in the energy industry in the United States and Canada. The CCRO is dedicated to the advancement of a broad range of best practices in the field of risk management and associated fields such as finance, accounting, operations and audit.

The CCRO's primary businesses are to:

- Provide a forum for sharing of professional practices;
- Author and publish technical white papers and other documents;
- Facilitate constructive industry initiatives; and
- Offer expert training and other support for professional development.

A number of working groups have been formed to address specific topics such as:

- Risk measurement approaches;
- Risk control & mitigation;
- Financial risk reporting;
- Market transparency; and
- Capital adequacy and liquidity.

Source: CCRO website: http://www.ccro.org/

10.3.2 Mandatory stress testing

Overview of draft conclusion

Currently the case has not been established for implementing a mandatory stress testing regime for NEM participants.

A mandatory stress testing regime would require participants to periodically conduct a stress test on the basis of prescribed scenarios.

The purpose of such a measure would be to provide insight into participants' abilities to deal with 'severe but plausible' shocks to the system. Participants would be required to estimate the impact of these shocks on their cash flows, profits and capital positions.

The scenarios for the stress test would aim to assess participants' resilience to a number of different shocks. One example could be where a participant's biggest counterparty defaults on its obligations during a sustained period of high spot prices.

The results of the stress tests would have to be reported to an external organisation. This organisation would also decide on the scenarios that need to be tested.

Stakeholder submissions

In their submissions, most participants opposed the idea of a stress test reporting regime. The arguments against such a measure included:

- It is unlikely that any one test could be designed that would be usefully applicable to the variety of NEM participants or capture information regarding their key risks.[208] This creates the risk that the test could be set either too low so that it becomes meaningless, or too high and unrealistic so that no business would be likely to pass.[209] Expecting a regulator to find the middle ground and make a judgment about which level is 'acceptable' would also be challenging.[210]
- It is unclear how effective an externally administered stress testing regime would be in reducing the risk of contagion.[211] Imposing a stress test is also not proportionate given the AEMC has not identified the risk participants pose to the NEM through OTC derivatives.[212]
- A stress test only provides a snapshot; it fails to recognise participants' real time response to market events.[213] Participants will have access to many and varied means to manage their business risk (real options) which would not be captured through a stress test.[214]
- As market participants take preparatory actions as the likelihood of a risk event increases, stress testing results reported would inevitably overstate the level of risk that would actually exist during a time of stress and this could lead to unnecessary and badly targeted regulation which creates additional costs with little to no verifiable benefit.[215]
- It is unlikely that a regulator will be in a better position than risk management experts within the businesses themselves to determine how they should manage risk.[216]
- It could act as a quasi-prudential standard and distort existing risk management decisions and practices.[217]

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208 Submissions to the stage two options paper by AGL, 18 December 2013, p6; Alinta Energy, 18 December 2013, p4; Energy Retail Association of Australia, 19 December 2013, p2; NGF, 19 December 2013, appendix; and Origin, 19 November 2013, p15.

209 Submission to the stage two options paper by ESAA, 19 December 2013, p3.

210 Submission to the stage two options paper by ERM Power, 18 December 2013, p16.

211 Submission to the stage two options paper by AGL, 18 December 2013, p6.

212 Submission to the stage two options paper by Origin, 19 November 2013, p16.

213 Submission to the stage two options paper by InterGen, 19 December 2013, p4.

214 Submission to the stage two options paper by the NGF, 19 December 2013, appendix.

215 Submission to the stage two options paper by the NGF, 19 December 2013, appendix.

216 Submission to the stage two options paper by AGL, 18 December 2013, p6; and ERM Power, 18 December 2013, p15.

217 Submissions to the stage two options paper by AFMA, 20 December 2013, p11; Alinta Energy, 18 December 2013, p4; EnergyAustralia, 19 December 2013, p8; GDF Suez, 19 November 2013, p6; and InterGen, 19 December 2013, p4.

- It is unclear how a mandated stress testing regime would fit within existing ASIC requirements and authority. In addition, how could the results of a stress test be interpreted if a participant were to fail a stress test but have a solid rating from credit agencies? This could potentially be a catalyst for uncertainty and have a destabilising effect on the market, contra to the goals of financial resilience and stability. Equally, it is not clear how participants would be obliged to respond if they failed a stress test.[218]
- It could lead to moral hazard by reducing incentives for prudent risk management if participants relied on a regulator to act on the results of the stress test.[219]
- A requirement to conduct regular stress tests would impose costs on market participants and key business resources would be diverted away from core operations to little overall benefit.[220]

Commission considerations and conclusions

Stress testing forces businesses to test their financial resilience when confronted with 'severe but plausible' shocks. Outcomes of stress testing can subsequently be used within a business to make strategic decisions about the adjustment of risk settings such as the company's risk profile. It is important for risk management to consider extreme events and develop appropriate mitigation plans (for example, implementing higher financial reserves).[221]

Stress testing can be expanded with scenario-analysis, in which portfolios are tested against a number of different potential scenarios for the future, with different financial market returns in each of those scenarios.

ASIC's review of OTC electricity derivative market participants' risk management policies demonstrated that regular stress testing is currently performed by over half of the participants, while scenario testing is performed by 32% of the participants.[222]

Industry concerns raised regarding the risks of moral hazard and distorted risk management practices from applying external stress testing could be addressed by the design of a stress test and clarifying what the consequences of such a test would be. An appropriately designed stress testing regime could provide incentives to improve risk management practices. It could make deficiencies more visible, which the business would have to address. Stress testing is increasingly being applied in the financial sector to assist regulators' monitoring of system risks. As yet, there is no evidence to suggest that it is causing moral hazard in that sector.

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218 Submission to the stage two options paper by Origin , 19 November 2013, p16.

219 Submissions to the stage two options paper by EnergyAustralia, 19 December 2013, p9; InterGen, 19 December 2013, p4; and NGF, 19 December 2013, appendix.

220 Submissions to the stage two options paper by InterGen, 19 December 2013, p4; and NGF, 19 December 2013, appendix.

221 The increasing importance of stress testing as a risk management and supervisory tool is recognised in the financial sector. See J. Laker, APRA Chairman, *The Australian banking system under stress – again?*, Speech 8 December 2012. Retrieved via the APRA website: www.apra.gov.au.

222 ASIC, *Review of OTC electricity derivatives market participants' risk management policies*, April 2014, p11 and 12.

Participants are concerned that if the parameters for the stress testing were set at the wrong level, the results could be misleading and create uncertainty and risks for the market. To address this, the organisation responsible would need to have sufficient expertise and understanding of the risks associated with operating in the NEM. In the absence of a prudential regulation framework, it is not clear which market body would have the necessary expertise to do so. In addition, it is not clear how the results could be used under the current market arrangements.

While stress testing is an important internal risk management tool, we consider an external stress testing regime for NEM participants would require sufficient resources to apply and develop the test. This would create costs and may not be a proportionate response to mitigating the risks to financial system stability in the NEM.

10.4 Transparency requirements

Overview of draft conclusion

The Commission does not consider that any further transparency measures to minimise risks to financial system stability in the NEM are justified at present.

We concluded in chapter 4 that there is currently limited information available on the risks to financial system stability in the NEM and the arrangements that participants have in place to manage those risks.

The G20 trade reporting obligations are a means to increase transparency about a sub-section of the overall electricity derivative markets, namely OTC market activity. The main objective of the G20 reporting obligation is to provide financial regulators with a better insight into OTC market activity, so that this information can be used for the existing regulatory functions of APRA, ASIC and the RBA to assess potential risks to stability of the overall financial system. Our advice regarding G20 OTC trade reporting is contained in the next chapter.

In addition to increasing transparency for the purpose of the G20 objectives, two other purposes of additional transparency could be considered:

- to assist participants in their assessment of counterparty risk in the OTC market; and
- to inform policy makers and energy market bodies of potential risks to NEM financial system stability.

Information to assist market participants in their assessment of counterparty risk in the OTC market

There are limits to what a participant can learn about its OTC counterparty's financial situation on the basis of available information sources (eg, annual reports, information from credit rating agencies). Also, participants will have limited knowledge about interconnectedness in the market, ie, how other participants are linked via OTC contracts and what the exposures under these financial relationships are. As a result, participants could be exposed to an unknown degree of risk.

One option to address participants' lack of information about OTC counterparties would be to make public more information on participants' risk management practices,

trading activities and exposures to other counterparties. This would require participants to share commercially sensitive information with other participants. However this is not recommended for the following reasons.

Given that the NEM is a relatively small market with relatively small number of players, this would raise obvious confidentiality and competition concerns. Requiring such information to be made public could have adverse impacts on participants' ability to hedge market risk in the NEM as counterparties would seek to use the information to their commercial advantage.

Good risk management requires participants to assess counterparty risk to the best of their ability. To manage any uncertainties around a counterparty's financial position, participants would also implement adequate insurance policies. If a participant is unsure about the risks associated with a counterparty due to incomplete information, it can take appropriate action to manage that risk.

For example, participants could require a counterparty that is considered to be less creditworthy to post collateral against its contractual obligations, or the participant itself could hold adequate financial reserves as a buffer against a potential counterparty default. It is our understanding that such considerations are generally part of NEM participants' risk management practices.

Information to policy makers and energy market bodies

Transparency about the electricity financial markets could potentially also be enhanced for the purpose of informing policy makers and energy market bodies. Currently, the annual 'Australian Financial Markets Report' published by AFMA and the annual 'Report on the Australian OTC derivatives market' published by the joint financial regulators both seek to provide a degree of transparency. Both publications are based on voluntary cooperation and have limitations in terms of completeness and the type of information that can be included or made public.

Establishing additional transparency obligations on participants for the purpose of better informing policy-makers and energy market bodies is not recommended.

By its nature, the information that would be collected would only provide a snapshot of the markets at any given time. Additional information that could be made public without raising confidentiality or competition issues would be limited. Such an obligation would also place a significant burden on participants in a relatively small market.

In their submissions to the stage two options paper, participants indicated that they would be willing to work with ASIC in order to develop and refine the OTC derivative survey to make it better targeted at the electricity market.

A refined, improved survey may be a more useful means of feeding relevant information about the OTC market into already existing publicly available publications than imposing additional information requirements.

10.5 Assessment against the national electricity objective

One of the risks that have been identified in this review is the risk of counterparty default under OTC contracts. Currently, the main mechanisms to mitigate that risk are the risk management practices adopted by market participants. In chapter 4, we concluded that it would be inappropriate to assume that risk management practices of participants can be solely relied on, or expected, to eliminate all risk to financial system stability in the NEM.

The question then becomes whether further measures should be introduced to prevent or mitigate these risks to financial system stability. We have considered a range of such measures. These measures include a prudential regulatory regime for the electricity sector, a mandatory code of practice, a mandatory stress testing regime and increased transparency measures. These measures all involve additional obligations being imposed on participants. These measures are common features of financial sector regulation.

Currently, the case is not established for mandating such additional measures in the NEM for the following reasons:

- introducing such measures would require substantial resources and expertise to be effective. The costs of doing so would likely outweigh the potential benefit of reducing risk in the NEM; and
- the nature and magnitude of risks to financial system stability in the electricity sector differ from those in the financial sector.

The NEM can be distinguished from the financial markets in a few critical ways. The electricity market and its participants are small compared to the broader financial market and its participants. Also, the size and nature of risks to financial system stability in the NEM compared to other financial markets are also different – as electricity market participants appear to use derivative contracts to hedge against price volatility on the spot market, as opposed to speculative trade.

Failure of one or more electricity businesses would cause severe problems for the electricity market, but would be unlikely to lead to major disruption of the wider financial system. This is different for (larger) banks and financial institutions whose failure could cause a collapse of the financial system with knock-on effects to many other parts of the economy, as the global financial crisis demonstrated in different parts of the world. Preventative measures such as prudential regulation of financial institutions and related risk management obligations are therefore crucial for maintaining stability and confidence in the financial system and the wider economy.

Finally, these measures would not address the key channel through which financial contagion is most likely to be transmitted in the NEM - through the ROLR scheme.

As reflected in previous chapters, reforms to improve NEM resilience are best focussed on improving how market arrangements manage and respond to an event of a SIMP failure.

11 Advice on the G20 measures for OTC reform

In response to the global financial crisis, leaders of the G20 countries developed a package of reforms relating to OTC derivatives. These reforms aim to reduce the risk of financial system instability arising from counterparty default and to increase transparency about OTC market activity.

Treasury, with input from the financial regulators, has been implementing these reforms in Australia. As part of this process, the Commission is required to provide advice on applying these reforms to electricity derivatives.

Our draft conclusions regarding the potential application of the G20 measures for electricity businesses are that:

- Transaction-level trade reporting would place significant costs and regulatory burdens on participants' OTC activities while the benefits of such a measure as a tool to analyse risks to financial system stability are less clear.
- Mandatory central clearing could discourage the use of OTCs as a hedging instrument. While mandatory central clearing can help to mitigate counterparty risk from causing financial contagion, contagion may still arise through other mechanisms, such as the cash flow risks associated with margining requirements.
- Margining and capital requirements would increase the cost of hedging as participants would have to obtain and deploy additional working capital to manage the associated cash-flow risk.
- Development of electronic trading platforms is more appropriately driven by participants' demand for such services rather than through rules-mandated use of such platforms.

For these reasons, we consider that under current circumstances, the costs of implementing the measures would outweigh any benefits. Therefore we consider the case for implementing the G20 reforms for electricity participants has not yet been established.

A failure of a large participant would not cause major instability to the overall financial system. This is due to the extent of the exposures the financial sector has towards the NEM. Therefore, it is not necessary to apply the measures to electricity derivatives in order to protect the overall financial system.

In addition, given the differences between the electricity market and the financial sector, such measures may not be effective in reducing the risk of financial instability in the NEM. These measures could increase participants' costs of managing spot market price volatility associated with operating in the NEM. This may have a number of consequences, such as transferring risk away from credit risk to other areas, without any net reduction in systemic risk. It could encourage vertical integration.

In this chapter, we set out our draft advice regarding the potential application of the G20 measures for reform of the OTC derivative market to the NEM financial market.

The sections in this chapter cover the four measures proposed by the G20:

- trade reporting;
- mandatory central clearing of standardised OTC derivatives;
- capital and margining requirements for non-centrally cleared OTC derivatives; and
- execution of standardised OTC derivative transactions on an electronic trading platform.

11.1 G20 measures for OTC trades

Following the GFC, leaders of the G20 countries agreed on a package of regulatory reforms for the OTC derivatives market. This agreement was based on the view that shortcomings in the regulation of the OTC market contributed to the problems that led to the GFC.

The G20 countries therefore agreed that:

> "All standardized OTC derivatives contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end-2012 at the latest.
>
> OTC derivatives contracts should be reported to trade repositories.
>
> Non-centrally cleared contracts should be subject to higher capital requirements."[223]

These reforms aimed to:

- improve transparency in the derivatives market;
- mitigate risks of system instability caused by counterparty default in OTC derivative markets; and
- protect against market abuse.[224]

Since the G20 declaration in 2009, work has been undertaken by G20 jurisdictions, including Australia, to implement these reforms.

11.1.1 The role and scope of advice on the application of G20 measures

In the G20 implementation framework for Australia under the Corporations Act, the Treasurer determines the classes of derivatives to which particular requirements will apply. The financial regulators - APRA, ASIC and the RBA (jointly referred to as: the financial regulators) - provide the Treasurer with advice on the implementation of the G20 OTC reforms. Following the Treasurer's determination regarding application of the

223 G20, Pittsburgh Declaration, at 10.

224 Ibid.

measures to classes of derivatives, ASIC may then make detailed derivative transaction rules.

The Corporations Act requires the Treasurer and ASIC, prior to making a determination mandating a commodity derivative or making derivative transaction rules with regard to a commodity derivative, to have regard to the effect on the underlying physical market.[225]

In doing so, the Treasurer is expected to seek the agreement of relevant ministers with portfolio responsibility for the underlying market, such as the Minister for Industry for the electricity market. Meanwhile, ASIC would be expected to seek the views of regulatory agencies with responsibility for the underlying market.[226]

No determination regarding the potential applicability of the G20 commitments to electricity OTC derivatives in Australia has yet been made. Treasury has indicated that the Australian Government will consider whether it is appropriate to impose any G20 requirements in relation to electricity derivatives after the completion of the financial market resilience review.[227]

The Commission's focus on these matters is the impact that potential application of the G20 OTC measures to electricity derivatives could have for the electricity market and electricity businesses, rather than the potential applicability of the G20 measures to electricity derivatives as a class. This is because other businesses, such as financial institutions, may also trade in OTC electricity derivatives.

The Commission is not in a position to advise on the ramifications of the applicability of any G20 measure to those groups of financial counterparties that are subject to regulations outside of the energy sector. We note, however, the risk of inconsistent treatment if parties to the same OTC transaction were subject to different regulatory obligations regarding OTC transactions.

In developing its views on the applicability of the G20 OTC measures to the electricity market, the Commission has had regard to the NEO and the assessment framework set out in chapter 1. We consulted stakeholders on these measures through the stage two options paper, published in November 2013.

11.2 Differences between the financial sector and NEM

OTC derivatives are a financial instrument, and electricity businesses in the NEM utilise this instrument to manage risk. The different characteristics of the financial sector and the electricity market as they currently exist are relevant in considering the potential application of the G20 OTC measures to electricity businesses.

225 See Corporations Act, paragraphs 901B(3)(a) and 901H(a).

226 Corporations Legislation Amendment (derivative transactions) Bill 2012, Supplementary explanatory memorandum.

227 See The Treasury, *Implementation of Australia's G-20 over-the-counter derivative commitments*, proposals paper, December 2012, pp13-14; and Ministerial trade reporting determination, Section 901B(2) Corporations Act 2001, explanatory statement, 2 May 2013, paragraph 15; and The Treasury, *Implementation of Australia's G-20 over-the-counter derivatives commitments*, proposals paper G4-IRD central clearing mandate, February 2014, p1.

The key differences are that:

- Participants in the NEM generally use OTC contracts to hedge against price risk in the spot market. There appears to be relatively little speculative trade. By this, we mean trades which are not related to reducing the spot price exposure of either a retail load or a generation asset. This is in contrast with the financial sector where there is considerable speculative trade.[228]
- Participants in the NEM are backed by tangible assets in the form of power stations and customer contracts which represent intrinsic value. A large proportion of the assets and liabilities of financial institutions could be made up of financial instruments and contractual arrangements which are more difficult to value.[229]
- The NEM is a relatively small market compared to the financial sector, with a relatively limited number of players. Participants in the NEM are therefore likely to have more knowledge of their counterparties compared to financial institutions which are more likely to deal with a large number of different counterparties.
- A failure of a large electricity business would not cause major instability to the overall financial system given the extent of the exposures the financial sector has towards the NEM.[230]

11.3 Scope of the G20 measures for OTC reform

One of the limitations with the G20 reforms is that they are primarily focussed on addressing counterparty risk under OTC contracts. As explained in chapter 2 and in the stage two options paper, participants face a variety of different risks when operating in the NEM, including counterparty risk, cash-flow risk, market risk and asset risk. In their risk management practices, participants seek to find the appropriate balance between those risks commensurate with their risk appetite and their overall risk management policies.

By focussing primarily on counterparty risk under OTC contracts, the G20 reforms could have two consequences:

- They could lead to a transfer of risk away from credit risk to other areas, without any net reduction in systemic risk. Participants have indicated that spot price risk is of greater concern than counterparty risk.[231]
- The extent to which the G20 measures help mitigate financial system stability risks is limited to a proportion of participants' activities and risk portfolios related

228 See also for example: submissions to the stage two options paper by Energy Supply Association of Australia, 19 December 2013, p1; ERM Power, 19 December 2013, p5 and 10; and GDF Suez, 19 November 2013, p3.

229 Submission to the stage two options paper by Macquarie Generation, 20 December 2013, p2.

230 Submissions to the stage two options paper by AFMA, 20 December 2013, p2; and Alinta Energy, 18 December 2013, p3.

231 Submissions to the stage two options paper by Alinta Energy, 18 December 2013, p3; EnergyAustralia, 19 December p6; ESAA, 19 December 2013, p2; GDF Suez , 19 November 2013, p2; and Macquarie Generation, 20 December 2013, p3.

to OTC contracts. This is because NEM participants are subject to other types of risks and utilise other types of contracts that are not covered by the G20 requirements, such as exchange traded contracts and weather derivatives.

We have taken account of such characteristics and differences when assessing the potential application of the G20 measures, including how such measures could affect the incentives and risk management practices of NEM participants.

11.4 Trade reporting

Overview of draft advice

The Commission considers that transaction-level trade reporting would place significant costs and regulatory burdens on market participants. Given how electricity participants use OTC trades to hedge against other risks, transaction reporting may not be meaningful without an understanding of participants' retail and generation positions.

It is also not clear how transaction-level reporting could be used to analyse risks to financial system stability given current regulatory arrangements. Therefore, we consider that any benefit from introducing this measure would not justify the extra cost imposed on the market.

11.4.1 Description of the measure

The G20 OTC reforms include an obligation for counterparties to OTC contracts to report details of every contract to licensed trade repositories. The objectives of such a trade reporting regime are to:

- enhance the transparency of transaction information available to relevant authorities and the public;
- promote financial stability; and
- support the detection and prevention of market abuse.[232]

Trade reporting seeks to address the fact that, during the GFC, the opacity of the OTC derivatives market made it difficult for regulators and market participants to assess counterparty risk and the degree of interconnectedness in the market. This inability to assess counterparty risk contributed to a decline in liquidity in derivatives markets as market participants became increasingly reluctant to trade with counterparties that might be insolvent.[233] This decline in liquidity in turn aggravated the crisis as participants were unable to manage their risks and financial obligations effectively.

232 ASIC, *Regulation Impact Statement: G20 OTC derivatives transaction reporting regime*, July 2013, p8.

233 Ibid, p9.

Current status of implementation in Australia

For Australia, ASIC published rules on trade reporting in July 2013.[234] The rules currently apply to the following derivative classes: interest rate, foreign exchange, equity, credit and commodity derivatives. As mentioned, the rules currently do not apply to electricity derivatives.

The rules contain an obligation on OTC contract parties to report certain data on every OTC trade undertaken in the aforementioned classes (except electricity). This includes 55 data fields that apply equally across all derivative classes, which ask for information on the parties to the contract (such as name, trading capacity (intermediary/own account) and domicile) and the details of the contract itself (such as type of contract, starting date and valuation). This is supplemented by a number of additional data fields specific for each of the derivative classes.

In addition to transaction data, counterparties to OTCs are required to report certain information on their outstanding positions in OTC derivatives. This includes 39 data fields that apply equally across all derivative classes, supplemented by a number of additional data fields specific for each of the derivative classes.

The data have to be reported to trade repositories, which are data warehouses that gather, store and provide access to the data they hold. The trade reporting rules determine that trade repositories must provide access to the reported data to relevant regulatory oversight bodies such as ASIC and APRA on their request.[235] These bodies may have access to aggregate-level data, position-level data and transaction-level data (including the identity of counterparties). Data access is not unlimited - it must be in connection with the exercise or performance of the relevant regulators' functions and powers.

This means that ASIC may for example use the data to analyse counterparty risk in the OTC derivative market or to investigate potential market manipulation. On this basis, ASIC may draw conclusions about the level of risk in the market and risk management practices by participants, which could potentially lead to further AFSL requirements if necessary. The current trade reporting rules do not provide ASIC and APRA with new regulatory powers to act upon the reported results if they reveal an emerging threat to financial system stability.

Trade repositories are also required to make certain information at an aggregate level available to the wider public. The ASIC trade reporting rules specify that a trade repository must create statistical data, for each reporting period of seven calendar days, about:

- all aggregate open positions as at the end of the last day in the reporting period for which the statistical data is created; and
- volumes by number and by value of derivative transactions reported during the reporting period.

234 ASIC, *Derivative Transaction Rules (Reporting) 2013*, 9 July 2013.

235 See section 904b(2) of the Corporations Act and rule 2.3.4 of the ASIC Derivative Trade Repository Rules 2013.

In terms of the entities to which the reporting obligation applies, the rules foresee a phased-in approach as set out in table 11.1.

Most electricity businesses which hold an AFSL will fall in the 'phase 3' category of entities. This means that electricity businesses may have to comply with the reporting obligations regarding the derivatives classes mentioned above. As mentioned, this excludes electricity derivatives at this stage, but electricity businesses could have to report on transactions in any of the other OTC derivative classes such as foreign exchange or interest rate derivatives.

Treasury has proposed to implement a more targeted AFSL reference in the trade reporting regulations. Under this approach the trade reporting obligations would only be imposed on AFSL holders with respect to derivatives authorised under their AFSL. So, for example, if an entity holds an AFSL with authorisation only for electricity derivatives, ASIC could not make rules requiring reporting of trades in other derivative classes by that entity.[236]

In Phases 1, 2 and 3, 'end-users' (which includes those electricity businesses that do not hold an AFSL) will only be impacted through reporting obligations that may be placed on their counterparties (ie, their banks or other electricity businesses which hold an AFSL), as end-users themselves are exempt from any trade reporting obligation at this stage.

In February 2014, Treasury proposed to make this exemption permanent. Treasury noted that this would give certainty to stakeholders and focus trade reporting implementation on the major market participants in Australia. The exemption may however need to be narrowed to ensure that appropriate information on systemically important OTC derivatives trading is available to regulators. Details of the exemption will be consulted upon following the analysis by ASIC of derivatives use in the Australian market, currently underway.

236 Australian Government, *Implementation of Australia's G-20 over-the-counter derivatives commitments - Proposals paper G4-IRD central clearing mandate*, February 2014, p27.

Table 11.1 Phasing of ASIC's trade reporting regime

		Effective date[237]	
Phase	**Reporting entities**	**Credit and interest rate derivatives**	**Commodity[238], equity and foreign exchange derivatives**
1	Australian 'swap dealers'[239]	1 October 2013	1 October 2013
2	Financial entities[240] with $50 billion or more notional principal outstanding[241]	1 April 2014	1 October 2014
3	Financial entities with less than $50 billion notional principal outstanding	*1 October 2014*	*1 April 2015*[242]
3A with relief	Phase 3 financial reporting entities which held $5 billion or more total gross notional principal outstanding in reportable OTC transactions as at 30 June 2014.	7 calendar months after first trade repository licence is granted, but not before 13 April 2015	The earlier of 12 October 2015 and 13 calendar months after first trade repository licence is granted
3B with relief	Phase 3 reporting entities other than 'phase A' entities	The earlier of: 13 calendar months after the first trade repository licence is granted or 12 October 2015.	The earlier of 12 October 2015 and 13 calendar months after first trade repository licence is granted

Taken from: APRA, ASIC, RBA, *Report on the Australian OTC Derivatives Market*, April 2014 and ASIC, Instrument 14/0633 - *Staggered and Delayed Start to Phase 3 of the OTC Derivative Transaction Reporting Obligation*.

237 Effective date of the transaction reporting obligation; position reporting obligations are delayed relative to these dates.

238 Excluding electricity derivatives.

239 A 'swap dealer' is a category of entities required to register with the US Commodities and Futures Trading Commission (CFTC).

240 Financial entities refers to Authorised Deposit-taking Institutions (ADI's), AFSL holders, Clearing and Settlement (CS) Facility License holders and exempt foreign licensees.

241 Measured as at 31 December 2013.

242 The original starting dates of 1 October 2014 and 1 April 2015 for phase 3 reporting entities have effectively been replaced by the dates mentioned under the '3A' and '3B' categories.

11.4.2 Stakeholder submissions

Participants expressed the following concerns with mandatory trade reporting for electricity OTC derivatives in their submissions to the stage two options paper:[243]

- The derivative transaction information would provide little or no useful information about a participant's overall risk position. A generator would be naturally long, meaning that it would be expected to offer volume into the market, while a retailer naturally short, meaning that it would be expected to bid for volume in the market. Hence, a participant's derivative position is not meaningful without an understanding of its physical position.[244]
- At the same time, trade reporting would create significant regulatory burdens and costs for participants associated with putting in place necessary IT systems and ongoing compliance costs.[245] Origin mentioned in its submission that ASIC has noted that it considers USD $292,771 as a reasonable approximation for set-up costs and USD $42,759 as a reasonable approximation for ongoing costs. Origin stated it understood that -based on financial intermediaries' implementation costs for complying with reporting requirements- these figures are conservative and implementation costs could be substantially higher.[246] Participants were concerned that these costs may put pressure on the price of electricity to rise and may also affect competition by increasing the barriers to entry for new entrants.[247]
- The standard reporting format would not be able to adequately capture the tailored, contingent or complex terms in many OTC contracts in the electricity sector. Incomplete trade reporting would misrepresent the market and credit risk exposure.[248]
- Public reporting of OTC trades would be of limited value to market participants because it would need to be on a more restricted basis than the information provided to financial markets, as there would be a greater risk of disclosing commercially sensitive information in a small market such as the NEM.[249]
- ASIC can already access any information it needs to allow it to make a judgement about risks in the electricity derivatives market. As there does not appear to be a

243 A summary of the stakeholder submissions to the stage two options paper is included as appendix C. The submissions to the stage two options paper can be found on the AEMC website via: http://www.aemc.gov.au/Markets-Reviews-Advice/NEM-financial-market-resilience.

244 Submission to the stage two options paper by Alinta Energy, 18 December 2013, p4.

245 See for example, submission to the stage two options paper by EnergyAustralia, 19 December 2013, p8.

246 Submission to the stage two options paper by Origin, 19 November 2013, p15.

247 See for example submission to the stage two options paper by AGL, 18 December 2013, p6.

248 Submission to the stage two options paper by Macquarie Generation, 20 December 2013, p5.

249 See for example submission to the stage two options paper by AGL, 18 December 2013, p6.

need to have near real time information provided to ASIC, the additional costs of trading reporting are not justified.[250]

- Data collected under trade reporting could lead to 'false positive' reactions by regulators, where they undertake inappropriate market interventions in an effort to forestall non-existent contagion risk on the basis of an incomplete understanding of NEM participants' true exposures to risk. Given the potential for such reactions, participants could change the nature of their OTC contracts in order to try to influence the regulator.[251]
- Transparency is not as vital in electricity derivatives markets since contagion in the sector is unlikely to spread significantly beyond the NEM should it occur. Instability is unlikely to have wider implications for the broader macro-economy as the system operator or government can intervene to direct physical assets to continue operating as per normal. This form of intervention is not available in other financial markets. For this reason, transparency is vital for promoting macroeconomic and market stability in other financial markets.[252]

As an alternative to transaction-level trade reporting, participants indicated they prefer to build on the annual OTC derivative survey undertaken jointly by the financial regulators. Participants expressed willingness to work with ASIC in order to refine this survey and tailor it better to the electricity market.[253]

In its submission to the stage two options paper, the Energy Networks Association (ENA) considered that measures aimed at improving financial reporting and transparency of financial credit arrangements would assist in the early identification and possible prevention of ROLR events. ENA noted that there is significant benefit in exploring such measures as part of a principles-based framework of risk mitigation strategies to prevent ROLR events from occurring.[254]

AEMO alternative trade reporting model

In its submission to the stage two options paper, AEMO explained how the Swap and Options Offset Reallocations (SOOR) arrangement[255] could contribute to mitigating the risks to financial system stability in the market. AEMO also suggested an alternative, voluntary, trade reporting mechanism that could work in conjunction with its SOOR-model. According to AEMO, this option could have the following characteristics:

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250 Submission to the stage two options paper by ESAA, 19 December 2013, p3. See also: submissions by Alinta Energy, 18 December 2013, p4; EnergyAustralia, 19 December 2013, p8; ERM Power, 18 December 2013, p14; InterGen, 20 December 2013, p3.

251 Submission to the stage two options paper by InterGen, 20 December 2013, p4.

252 Submission to the stage two options paper by Macquarie Generation, 20 December 2013, p5.

253 See for example submissions to the stage two options paper by AGL, 18 December 2013, p2; EnergyAustralia, 18 December 2013, p8; ERM Power, 18 December 2013, p6 and 14; and GDF Suez, 19 November 2013, p7.

254 Submission to the stage two options paper by ENA, 19 December 2013, p1.

255 The SOOR is an arrangement that allows the netting of OTC contracts with physical positions. The SOOR is permitted under the current market rules, but is currently not applied in practice due to AEMO needing a clearing and settlement facility license.

- AEMO could establish a database similar to a trade repository, taking into account the rules set by ASIC.
- The system could only capture the key information necessary to support the SOORs and any other service sought by industry. The amount of information to be collected under this mechanism would therefore be more limited than under the ASIC trade reporting rules.
- Market participants could then be offered the option of accessing the SOOR mechanism through the voluntary trade repository.
- Through the SOOR mechanism, AEMO could consider the reallocated OTC transactions in the calculation of prudential obligations, and settle the transactions with the spot market. This would provide netting opportunities, which, according to AEMO could give rise to a range of benefits, including:
  - less capital tied up in prudentials, while the prudential standard is still met;
  - reduced risk of default arising from the risk of meeting margin and settlement payments.
- Once established, an AEMO trade repository could be leveraged by its users to provide added value through initiatives such as a forward price indices.
- AEMO could, if required, provide access to the information contained in the database to prudential regulators as required by any regulatory obligations, as would be the case from any other trade repository.
- Although offered on a voluntary basis, AEMO stated that the aim of the trade repository would be to attract a large proportion of the OTC derivatives that are structured in a way which is consistent with the SOOR arrangements. When combined with the reporting of exchange-traded derivatives, AEMO argued that the level of trade reporting may be sufficient to address systemic risk and provide transparency to the market and prudential regulators.[256]

AEMO noted the advantage of this model would be that it could build on existing platforms and processes already developed for the purpose of managing reallocations. In its view, the model could therefore provide for a lower cost alternative compared to the services provided by commercial trade repositories.

11.4.3 Commission considerations and conclusions

Transaction-level trade reporting would provide detailed information on every single OTC transaction undertaken. The volume of information received would need to be processed and interpreted further in order to arrive at a more complete picture of financial interconnectedness and to create useful transparency about OTC market activity and systemic risk.

Only the regulators who have access to the reported data would be able to use and assess this volume of information. In the financial sector, this applies to the financial regulators. Given current arrangements for the NEM, it is not clear who would collect the data and how transaction reporting of electricity OTC contracts would be used.

256 Submission to the stage two options paper by AEMO, 19 December 2013, p4.

In the case of the electricity market, information about OTC activity alone may not be sufficient to get a complete picture of risks to financial system stability. This is because participants in the electricity market primarily enter into OTC contracts to offset risk in the physical commodity market. Information about the physical side of the trade, or a participant's consumer book or positions in the futures market, would also be necessary to get a better picture of risks to financial system stability.

For example, a certain transaction on the OTC derivative market could appear to be 'risky' at face value. This could not actually be the case if the transaction offsets a position by the same participant in the futures market.

Because G20 trade reporting is limited to OTC derivative activity, it would not, on its own, be effective in providing a complete picture of how participants are managing their risks associated with operating in the NEM including counterparty credit risk.

Implementing transaction-level trade reporting would place costs and regulatory burdens on participants' OTC activity. These costs could be significant, as noted by Origin. Hedging risk through the use of OTC derivatives would therefore become more expensive. As a consequence, participants may choose to transfer risk to other parts of the business, which may not lead to an overall reduction of risk. In addition, it could create a barrier to entry for new entrants.

We also note that some practical difficulties have arisen overseas with applying transaction-level reporting in practice. Amongst other things, this has been due to confusion about the exact form of data to be reported and differences in reporting standards between trade repositories.[257]

For these reasons, the costs of implementing a transaction-level mandatory reporting regime would not proportionate to the benefits. We consider that transaction-level trade reporting would not be likely to contribute to the NEO and therefore advise that such a measure not be implemented for electricity businesses.

We also note that the volume of OTC transactions in electricity will be substantially less than the volume in the financial OTC markets. Developing an understanding of electricity participants' use of OTC contracts may be better achieved through a survey-based approach. ASIC, with the other financial regulators, has conducted a number of surveys on electricity OTC contracts.

An OTC derivative survey as currently undertaken by the financial regulators could contribute to regulators' understanding of the OTC market and we note that participants have expressed a willingness to work with ASIC to refine the survey. This could provide some transparency to ASIC on management of counterparty credit risk in the NEM without the excessive costs of the G20 measure.

In regard to AEMO's suggested trade reporting mechanism, the Commission recognises that the SOOR mechanism provides benefits through leading to a more efficient use of capital in the industry. However, the proposed additional trade reporting aspect could discourage participants from using this type of reallocation. In addition, as the

257 For example, see Osipovich, A., *US energy firms facing Dodd-Frank trade reporting 'nightmare'*, Energy Risk, 3 February 2014; and G. Carr, *Emir reporting date sparks 'mad rush' in energy derivatives market*, Energy Risk, 17 February 2014.

mechanism is based on voluntary participation, it may not provide a complete picture from the perspective of analysing indicators of risk to financial system stability in the NEM.

11.5 Mandatory central clearing

Overview of draft advice

Introducing a mandatory requirement for OTC contracts to be centrally cleared would increase costs and discourage the use of such contracts to hedge market risk in the NEM. It could introduce new sources of risk to system stability in the NEM due to the associated margining requirements.

A central clearing obligation could have a number of unintended consequences. It could encourage participants to hedge internally, and could increase vertical integration as a result. Further, the extra costs and decline in liquidity of available hedges could disproportionately affect small retailers. This could negatively affect retail competition in the NEM. We therefore advise against imposing a central clearing obligation on electricity businesses.

There could be efficiencies through greater netting and clearing of all electricity transactions in the NEM. This includes aligning OTC contracts with spot and futures market transactions. AEMO and the ASX have recently announced that they are jointly exploring solutions in this area.

11.5.1 Description of the measure

Under the G20 measures, counterparties to OTC contracts are required to clear their transactions through a central counterparty (referred to as a 'clearing house'). The clearing house interposes itself between the original counterparties, and effectively takes on the rights and obligations under the contract and guarantees performance of the transaction.

In this way, a clearing house could simplify the network of financial interconnections between participants. In particular, it would be able to net off transactions between various participants and provide safeguards that the failure of a member to the clearing house would not affect other members. This would likely reduce total risk.

To provide the clearing house with sufficient financial guarantees, members of the clearing house must provide initial margins and put up daily variation margins against changes in the value of the contracts. These protection measures allow clearing houses to absorb and mitigate the potential knock-on effects of a major counterparty defaulting.

In order for a contract to be able be cleared, a number of preconditions must be met:

- the contract must have a robust valuation methodology so that the central counterparty can confidently determine margin and default fund requirements;
- there must be sufficient liquidity in the market to allow for close out and/or hedging of outstanding positions in a default scenario;

- there must be sufficient transaction activity and participation so that the fixed and variable costs of clearing the transaction are covered; and
- there must be some standardisation of contracts to facilitate the central clearing party's trade processing arrangements.

Current status of implementation in Australia

In February 2014, the Commonwealth Treasury proposed that a determination be made in the second quarter of 2014 that will allow ASIC to make rules requiring the central clearing of US dollar-, Euro-, British Pound- and Yen-denominated interest rate derivatives. The clearing obligations would only apply to large financial institutions with significant cross-border activity in these products.[258] The proposals are based on recommendations provided by the financial regulators in July 2013.[259]

Treasury noted that the Government will wait for the recommendations from future market assessments before considering central clearing mandates for any other derivatives. Regarding electricity derivatives, Treasury noted that these instruments will not be considered for inclusion in the central clearing mandate until the completion of the present review.[260]

In their 2014 Report on the Australian OTC Derivative Market, the financial regulators made further recommendations regarding the implementation of a central clearing mandate.[261] In the report, the financial regulators:

- recommended that the Government consider a central clearing mandate for trades between internationally active dealers in Australian dollar-denominated interest rate derivatives;
- did not see a case for implementing a central clearing mandate for North American, European and Japanese referenced credit index derivatives at this time; and
- did not recommend that a central clearing mandate be introduced at this time for 'non-dealers'.

This category includes non-financial entities such as electricity businesses.

Regarding 'non-dealers', the regulators noted that:[262]

> "With few exceptions, non-dealers' activity in OTC derivatives is relatively limited and motivated primarily by hedging of underlying cash flows and exposures. Accordingly, even though there may be some systemic risk reduction benefit from central clearing by non-dealers, it is likely to be limited. Indeed, where small financial institutions and especially

258 Australian Government, *Implementation of Australia's G-20 over-the-counter derivatives commitments - Proposals paper G4-IRD central clearing mandate*, February 2014.

259 APRA, ASIC, RBA, *Report on the Australian OTC Derivatives Market*, July 2013.

260 Australian Government, *Implementation of Australia's G-20 over-the-counter derivatives commitments -Proposals paper G4-IRD central clearing mandate*, February 2014, p1.

261 APRA, ASIC, RBA, *Report on the Australian OTC Derivatives Market*, April 2014.

262 Ibid, p3.

non-financial entities have restricted access to liquid assets to meet CCPs' initial and variation margin obligations, new sources of risk could emerge."

Therefore,

> "the Regulators do not believe it is appropriate to mandate central clearing for non-dealers at this time. The Regulators will nevertheless continue to monitor the availability of client clearing for OTC interest rate derivatives and the incentives-led migration to central clearing, particularly by non-dealers with access to sufficient liquidity. In addition, the Regulators will review the impact of international regulatory developments."

11.5.2 Stakeholder submissions

In their submissions to the stage two options paper, stakeholders generally rejected mandatory central clearing on the following grounds:

- Central clearing requires a high degree of standardisation of OTC contracts. Bespoke OTC contracts play an important role in risk management and their standardisation would actually increase risk as participants are forced to employ imperfect hedges.[263]
- Central clearing would exacerbate the risk of contagion in periods of high price volatility because of the requirement to put up variation margins, which can be quite substantial.[264]

AFMA provides the following example of margining costs: for a contract position of 10TWh that was exchange traded, the initial margins required would be $32 million and a $5/MWh adverse movement in price would require a further $50 million in variation margin.[265]

11.5.3 Commission considerations and conclusions

A mandatory central clearing requirement as envisaged by the G20 recommendations aims to capture those OTC contracts which are standardised to a sufficient degree so that they can be cleared through a clearing house. As such, it does not force all OTC contracts to be standardised.

For the proportion of electricity OTCs that would be suitable for central clearing, a clearing house would reduce counterparty risk by guaranteeing performance of the transaction. Further, on a whole-of-market level, the clearing house could reduce overall systemic risk by netting off various transactions.

Introduction of such a measure would, however, impose costs on participants, in the form of an obligation to meet margining requirements. Margining requirements create cash flow risks, ie the risk that a company's available cash will not be sufficient to meet its margining requirements. During periods of high price volatility, this could place

263 Submissions to the stage two options paper by AFMA, 20 December 2013, p7; and Macquarie Generation, 20 December 2013, p4

264 Submissions to the stage two options paper by AGL, 18 December 2013, p7; Macquarie Generation, 20 December 2013, p4;

265 Submission by AFMA to the stage two options paper, 20 December 2013, p9.

significant financial burdens on participants. It could also discourage the use of derivatives as a hedging instrument and further aggravate the risk of financial contagion instead of reducing it.

A number of other unintended consequences could also result. Participants could seek to hedge internally instead of hedging with other participants, thereby increasing vertical integration. Also, the extra costs and decrease in the liquidity of available hedges could disproportionately affect small retailers and therefore impact upon retail competition in the NEM. This could also incentivise participants to 'game' the requirement and avoid a clearing obligation by introducing bespoke elements in their standard contracts.

NEM participants generally use OTC contracts as a hedge to manage market risks, rather than for the purposes of speculative trade. As a result, the benefits from mandatory central clearing of such OTCs in terms of reduction of overall systemic risk are likely to be limited. This point has been recognised in the overseas implementation of the G20 reforms where exemptions to the clearing requirements for non-dealers such as electricity businesses trading OTC derivatives have been introduced. Such exemptions are either based upon the size of the participant's trading book or whether the OTC trade is a physical hedge.[266]

The reduction in overall systemic risk is also likely to be limited because only a proportion of the electricity OTCs will be suitable for central clearing. This would undermine the effectiveness of such a measure.

For these reasons, we consider that mandatory central clearing of OTC contracts would not be likely to meet the NEO and should not be introduced for electricity businesses. The potential usefulness of central clearing as a risk management tool should be assessed by each participant individually.

An alternative approach, which goes beyond the G20 central clearing measure, could be to combine the clearing of all transactions -spot, futures and OTC- onto a single clearing platform. Such a proposal could generate market efficiencies through:

- lower hedging costs as duplication of prudential and margining requirements can be avoided;
- more effective use of collateral across the spot and contract markets; and
- operational and netting efficiencies as circular cash flows can be avoided.

Previous AEMO and Commission studies have identified benefits from combining and offsetting spot and OTC transactions and spot and futures transactions.[267]

The potential for such cost savings could spur initiatives that seek to achieve this and it is therefore appropriate to leave commercial providers and industry to work together to drive the development of such models that best meet market needs.

One such initiatives was recently announced by AEMO and the ASX. AEMO and the ASX announced they are collaborating to identify solutions that enable derivative and

266 See AEMC, *Stage two options paper - NEM financial market resilience review*, appendix A.

267 See, for example, AEMC, *Review into the role of hedging contracts in the existing NEM prudential framework*, 30 June 2010.

physical trades to be cleared and settled through a more integrated process, facilitating offsets between the different trades.[268] AEMO and the ASX indicated that the benefits for participants would be the reduced amount of capital they would be required to provide, while still meeting the Prudential Standard, in addition to administrative cost savings. AEMO and the ASX anticipate that the design study will reach some conclusions by the end of the 2014.

11.6 Capital and margining requirements for non-centrally cleared OTCs

Overview of draft advice

The Commission considers that introducing capital or margining requirements for OTC transactions would increase the cost of hedging as participants would have to obtain and deploy additional working capital to manage the margin payments under this requirement. This could have the effect of merely converting credit risk into cash-flow risk for participants, without any material reduction in systemic risk in the NEM. We advise against introducing this measure onto NEM electricity participants.

11.6.1 Description of the measure

Under the G20 recommendations, OTC derivative contracts that are not centrally cleared - for example because they are not sufficiently standardised or because no clearing house is willing to clear a particular class of derivatives - should be subject to certain capital or margining requirements. This reflects a consideration that there is generally higher risk associated with these derivatives.

Capital and margining requirements attempt to reduce the risk of contagion by ensuring that collateral is available to offset losses caused by the default of a derivatives counterparty. Capital and margining requirements can also have broader benefits, by reducing the system's vulnerability to potentially de-stabilising shocks and limiting the build-up of uncollateralised exposures within the NEM. It is also considered that margining requirements on non-centrally-cleared derivatives will encourage parties to trade more contracts through central clearing because it reduces the cost disadvantage associated with central clearing houses.

The Basel Committee on Banking Supervision (BCBS) and the International Organisation of Securities Commissions (IOSCO) have published recommendations in this area, proposing that all financial firms and systemically important non-financial entities that engage in non-centrally cleared OTC derivatives must exchange initial and variation margins as appropriate to the counterparty risk posed by the underlying transactions.[269]

268 AEMO, *Energy Market Update*, June 2014, p9.

269 BCBS-IOSCO, *Margin requirements for non-centrally cleared derivatives*, September 2013.

Current status of implementation in Australia

The financial regulators have not yet made recommendations to Treasury in this area but have indicated they will consider the BCBS-IOSCO recommendations, as well as developments in key jurisdictions, in considering the implementation of such a measure for Australia.[270]

11.6.2 Stakeholder submissions

Stakeholders, in their submissions to the stage two options paper, generally opposed implementation of a margining requirement, for the following reasons:

- Imposing margining requirements would increase cash flow pressures on participants and would therefore increase the cost of hedging. The cash flow risk could be a greater risk than the exposure to counterparty credit risk. Increased hedging costs could either lead to higher consumer prices, or lead to participants taking on more market risk which in turn would increase overall risk.[271]
- Analysis by Seed Advisory demonstrates that the main contagion risk of OTC counterparty default lies in the cost for the non-defaulting counterparty to recontract lost hedges. Margining does not contain this risk, but rather increases the cost of capital required thereby aggravating contagion risk.[272]
- The costs associated with margining may create barriers to entry for new entrants, stifling competition in the NEM.[273]
- Margining requirements also have the potential to change the balance sheet of participants away from lower cost debt financing to higher cost equity financing This in turn has the potential to lower the profitability of the participant and likely return to shareholders.[274]

Regarding the cash flow risks associated with margining, the NGF provided the following an example which is presented in box 11.1.[275]

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270 APRA, ASIC, RBA, *Report on the Australian OTC Derivatives Market*, April 2014, p5.

271 Submission to the stage two options paper by AGL, 18 December 2013, p6; EnergyAustralia, 19 December 2013, p10; ERM Power, 18 December 2013, p17; GDF Suez, 19 November 2013, p6; NGF, 19 December 2013, appendix; and Origin, 19 November 2013, p13.

272 Submissions to the stage two options paper by AFMA, 20 December 2013, p11; Alinta Energy, 18 December 2013, p2; EnergyAustralia, 19 December 2013, p10; ESAA, 19 December 2013, p4; GDF Suez, 19 November 2013, p5; InterGen, 19 December 2013, p5; and Origin, 19 November 2013, p12.

273 Submission to the stage two options paper by AGL, 18 December 2013, p6; and EnergyAustralia, 19 November 2013, p10.

274 Submission to the stage two options paper by Origin, 19 November 2013, p17.

275 Submission to the stage two options paper by the NGF, 19 December 2013, appendix.

Box 11.1: Example margining requirement

Electricity participants typically seek to hedge a material portion of their portfolio output at least 3 years in advance and hence relatively long-term base load hedges are highly desirable for market risk management purposes. This means that under mandatory margining, on any given day, a participant would be required to have the net liability value of its entire hedge book for 3+ years lodged with a clearing participant. The resulting margining would put considerable cash flow strain on participants as the mark to market value of an entity's outstanding contract position is not correlated, in time, with its short term spot market and contract settlements.

In recent electricity market history, it has been large futures positions that have been the cause of great financial stress to NEM participants. For example, the forward curve increases experienced during the 2007 Queensland drought and resultant futures margin calls left some participants either close to, or breaching, their AFSL Adjusted Surplus Funds requirements. Rather than continuing to meet those margin call requirements, some participants chose to close out their futures positions (effectively forfeiting the market risk management benefits of those contracts).

For example, in 2007, the contract market was very volatile due to supply constraints caused by the drought. This resulted in a substantial jump in the contract market multiple calendar years out. On 14 May 2007, base contract prices for the calendar year 2009 rose from $57 per MWh to $70 per MWh in less than a week. The off peak contract also jumped from $50 per MWh to $70 per MWh during the same period.

If a participant had, for example, an aggregate of 1000MW calendar 2009 contracts acquired via the exchange, and assuming daily price changes averaged $3/day, the participant, would have to pay the exchange over $26 million per day in variation margins ($3 * 1000MW * 8760 hours), for at least five days straight. The impact would be increased if the participant also had contracts for other calendar years.

11.6.3 Commission considerations and conclusions

Capital and margining requirements would increase the level of financial reserves available in the market to mitigate counterparty risk. In chapter 2 we noted that it does not appear to be standard practice among NEM participants to exchange collateral for very OTC transaction they undertake. We also noted stakeholder views on why this is the case.

Both capital and margining perform risk mitigation functions but are distinct in a number of ways. First, margining is 'defaulter-pay'. This means that, in the event of a counterparty default, margining protects the surviving party by absorbing losses using the collateral provided by the defaulting entity. By contrast, capital adds loss absorbency to the system because it is 'survivor-pay', ie using capital to meet such losses consumes the surviving entity's own financial resources.

Second, margining is considered to be more 'targeted' and dynamic, with the margining amount being adjusted over time to reflect changes in the risk of the trade. By contrast, capital is shared collectively by all the entity's activities and may thus be more easily depleted at a time of stress. It may also be more difficult to rapidly adjust it to reflect changing risk exposures.

Both requirements would increase the cost of hedging. Participants would have to obtain and deploy additional working capital to manage the cash-flows. Box 11.1 provides an example of the potential impact of variation margins in extreme market conditions.

The increased pressure on working capital could result in cash flow risk and the withdrawal of liquidity in the contract markets. Obtaining the necessary additional working capital may also be more difficult for highly leveraged businesses and therefore could create a bias towards certain financial structures.

Further, the cost of complying with extra requirements could disproportionately affect smaller retailers, thereby having a negative impact on retail competition in the NEM. The additional cost of such a measure on smaller retailers would depend on if and how much collateral they are already required to provide under their hedge contracts.[276] Similar to a mandatory clearing requirement, we consider that the costs associated with margining or capital could also lead to increased vertical integration.

Introducing margining or capital requirements for non-centrally cleared OTC contracts would make it more costly for participants to manage market risk in the NEM. We also note that introducing margining requirements may not be completely effective in addressing all the costs associated with OTC counterparty default. Based on the Seed Advisory analysis, the majority of the contagion risk of OTC counterparty default could stem from the costs incurred by the non-defaulting counterparty to recontract lost hedges. As was also mentioned in participants' submissions, margining does not contain this risk.

We note that increasing capital requirements would not create the same magnitude of cash-flow risk for participants. Higher capital reserves could act as a financial buffer that could cushion the effects of financial shocks, including a counterparty default, and improve the ability of the market to absorb the impacts of the failure of one participant.

Overall, the Commission considers a case has not been established at this time for requiring participants to increase their capital reserves, as the costs of such a measure are likely to outweigh the benefits.

276 It is our understanding that, often, smaller retailers are already required to provide certain collateral to their counterparties in order to obtain hedge contracts.

11.7 Platform trading

Overview of draft advice

The Commission advises that the development of electronic trading platforms is more appropriately driven by participants' demand for such services rather than mandating the use of such platforms.

11.7.1 Description of the measure

This measure, as envisaged under the G20 commitments, would introduce a requirement on participants to conduct OTC derivative transactions, where appropriate, via an electronic trading platform.[277]

The purpose of trading platforms is to bring greater transparency to the OTC market. Via such platforms, information about OTC derivatives is made available to all market users. Improved price transparency could allow better comparability of OTC products and could contribute to 'market making' and more efficient pricing.

Trading on an electronic trading platform is open to a broad set of participants and may facilitate access to the market. Therefore, it may in turn decrease the level of counterparty concentration in a derivative market.

In order to be traded on such a platform, OTC transactions would need to be sufficiently standardised. As electricity OTC derivatives can be non-standard, such a requirement would only capture a proportion of the OTC electricity derivative market.

Current status of implementation in Australia

In February 2014, Treasury proposed that no decision be taken on any mandatory requirements until subsequent reviews by the financial regulators. This follows recommendations from the financial regulators in their 2013 report, in which they indicated that they did not make any recommendations regarding the mandating of trading on electronic platforms at that stage and that they will continue to follow the developments in this space.[278]

In their April 2014 report, the financial regulators took the view that it is not yet appropriate to recommend a mandatory platform trading obligation, for three key reasons:[279]

- Before making any recommendation on mandatory platform trading, the regulators would prefer to see further consensus emerge across key jurisdictions on the characteristics of relevant trading platforms for such purposes.
- Survey data on market liquidity, and the extent to which Australian participants are using non-fully electronic execution channels, suggest that liquidity in the

277 Electronic trading platforms provide a facility through which OTC derivatives can be traded electronically and multilaterally. In return for its services, a trading platform charges fees payable by participants.

278 APRA, ASIC, RBA, *Report on the Australian OTC derivatives Market*, July 2013.

279 APRA, ASIC, RBA, *Report on the Australian OTC derivatives Market*, April 2014, p4.

local market is not high by international standards in many asset classes. They also suggested that market participants continue to predominantly use other execution channels, presumably for a range of commercial reasons.

- Treasury is undertaking a review of the Australian Market Licence regime, and the regulators would prefer to await the outcome of that review prior to recommending any mandatory trading obligations.

The regulators noted that they will continue to monitor developments to gauge the implications of overseas regimes for methods of execution and liquidity in the Australian OTC derivatives market, and more generally monitor evolving trends in the utilisation of electronic trading platforms.

They noted that international consistency may become a higher priority if overseas jurisdictions were to implement mandatory platform trading obligations for products or asset classes widely traded in Australia, including asset classes that may be subject to mandatory clearing obligations.

Consequently, the regulators indicated they may consider it necessary to reassess the case for mandatory trading obligations for such products, primarily on international consistency grounds, and potentially make recommendations to the government ahead of the next market assessment.[280]

11.7.2 Stakeholder submissions

In their submissions to the stage two options paper, participants considered that trading OTC derivatives on an electronic platform should not be mandated. AGL noted for example that this would require a high degree of standardisation, which would make it difficult for participants to manage the underlying risk of spot market volatility in the NEM.[281] ERM Power made the same point and also did not see value in developing electronic platforms in competition with the exchange.[282]

11.7.3 Commission considerations and conclusions

In the stage two options paper, the Commission considered that, while there may be potential benefits associated with the use of electronic trading platforms, the development of such platforms is more appropriately driven by participants' demand for such services rather than through rules-mandated use of such platforms.

Platform trading requires a high degree of standardisation which is unlikely to be possible for all electricity OTC derivatives. Also, we note that there is substantial difference in the level of liquidity in electricity OTC contracts compared to financial OTC markets and therefore the benefits of platform trading to reduce systemic risk may be limited.

For these reasons, we remain of the view that trading of OTC contracts on an electronic trading platform should not be mandated. Platform trading is currently not mandated

280 Ibid.

281 Submission to te stage two options paper by AGL, 18 December 2013, p7.

282 Submission to the stage two options paper by ERM Power, 18 December 2013.

for any of the derivative classes and we note the financial regulators' view that it is not yet appropriate to recommend a mandatory platform trading obligation.

11.8 Assessment against the national electricity objective

The G20 recommendations contain a package of measures specifically targeted at OTC derivatives. Their aim is to reduce systemic risk by increasing transparency or reducing the counterparty credit risk that arises under these contracts.

There are a number of reasons why the Commission advises against applying such measures to participants at this time. Any potential benefit associated with such measures in reducing systemic risk is not considered sufficient to justify their costs. Furthermore, such measures could have a number of unintended consequences on competition and market structure in the NEM.

Given the current differences between the electricity market and the financial sector, such measures are unlikely to be needed. A failure of a large participant would not cause major instability to the overall financial system given the extent of the exposures the financial sector has towards the NEM.

Risk management in the NEM involves a continuous trade-off between various sources of risk, of which counterparty risk is only one. The G20 reforms are primarily focussed on addressing counterparty risk under OTC contracts. Accordingly, they may have the unintended effect of discouraging participants from using OTC instruments in favour of, say, taking more spot market exposure. The reforms could result in participants changing their risk management practices so that they become less exposed to credit risk, but are more exposed to other types of risk.

We would guard against introducing any measures that would significantly undermine participants' abilities to make commercial decisions on how best to manage their own risks. Forcing participants to move OTC contracts onto a central clearing platform would limit choice and increase costs.

Such a move could disproportionately harm smaller retailers and create a barrier to entry for new entrants, thereby reducing competition in the NEM. Smaller participants may especially rely on OTC contracts as they may not be able to meet the daily margining requirements under exchange traded contracts. Reducing liquidity in the OTC market would make it more difficult for small retailers to manage market risk in the NEM.

Further, increasing the regulation of OTC contracts could encourage more vertical integration, if participants consider that the best way of overcoming costs associated with risk management options is to hedge risks internally by integrating market activities.

Abbreviations

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
AFMA	Australian Financial Markets Association
AFSL	Australian Financial Services Licence
APRA	Australian Prudential Regulation Authority
ASIC	Australian Securities and Investments Commission
ASX	Australian Securities Exchange
BCBS	Basel Committee on Banking Supervision
CCRO	Committee of Chief Risk Officers
COAG	Council of Australian Governments
Commission	See AEMC
CPT	cumulative price threshold
DNSP	distribution network service provider
ENA	Energy Networks Association
ESAA	Energy Supply Association of Australia
G20	Group of 20 countries
GFC	global financial crisis
IOSCO	International Organisation of Securities Commissions
MCE	Ministerial Council on Energy
MCL	maximum credit limit
MPC	market price cap
MWh	megawatt hour
NECF	National Energy Customer Framework
NEL	National Electricity Law
NEM	National Electricity Market
NEO	national electricity objective
NER	National Electricity Rules
NERL	National Energy Retail Law

NERR	National Energy Retail Rules
NERO	national energy retail objective
NGF	National Generators Forum
OSL	outstandings limit
OTC	over-the-counter
PM	prudential margin
RBA	Reserve Bank of Australia
SAR	special administration regime
SIMP	systemically important market participant
SOOR	Swap and Options Offset Reallocations