Australian Energy Market Commission

RULE CHANGE

CONSULTATION PAPER

National Electricity Amendment (Application of Offsets in the Prudential Margin Calculation) Rule 2015

Rule Proponent
AEMO

10 December 2015

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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.

Contents

1 Introduction

On 28 May 2015, the Australian Energy Market Operator (AEMO) (Proponent) submitted a Rule change request to the Australian Energy Market Commission (AEMC or Commission) in relation to determining a Market Participant's (MP's) prudential margin under the National Electricity Rules (NER or Rules).

The rule change request proposes to remove clause 3.3.8(e) from the NER. This clause currently restricts offsetting between trading amounts and reallocation amounts in the prudential margin calculation, and therefore impacts on the level of credit support provided by a MP to AEMO.

This consultation paper has been prepared to facilitate public consultation on the rule change proposal, and to seek stakeholder submissions on the rule change request.

This paper:

- provides relevant background to the rule change request;
- provides a summary of the rule change request, including the key issues identified by AEMO;
- sets out a proposed assessment framework for the rule change request;
- identifies a number of questions and issues to facilitate consultation on the rule change request; and
- outlines the process for making submissions.

Submissions on the rule change request are to be received by 4 February 2016. Details on how to lodge a submission are contained in Chapter 5 of this consultation paper.

2 Background

AEMO's rule change proposal seeks to remove the restriction on offsetting trading and reallocation amounts in a Market Participant's (MP's) prudential margin under clause 3.3.8(e) of the Rules.

In order to consider the implications of the rule change request, this chapter provides an overview of the prudential framework in the NEM, as provided for in the Rules, including the key components of a MP's prudential settings and an overview of the role of reallocations in the NEM. As the role of the prudential framework is to minimise the probability of losses in the NEM in the event of a MP's default, this chapter also briefly explains the default process under the Rules.

2.1 Overview of prudential requirements in the energy markets

Retailers in the NEM are normally net purchasers of electricity and are therefore required to provide credit support to AEMO under the Rules. In addition to the credit support obligations to AEMO, NEM participants enter into hedging arrangements such as over the counter (OTC) and futures contracts to manage their risks in the NEM and may be required to provide credit support to the counterparties to these contracts.

NEM participants (termed MPs) must also comply with other credit support requirements, such as the prudential requirements imposed by the infrastructure service providers such as the retailer distributer credit support arrangements under chapter 6B of the Rules.[1]

2.2 Prudential framework in the NEM

The prudential framework for the National Electricity Market (NEM) is set out in Rule 3.3 of the NER and is supported by AEMO's Credit Limit Procedures. The framework is a set of requirements established to minimise AEMO's risk of financial exposure in the event of default by a MP. The National Electricity Market Amendment (New Prudential Standard and Framework) Rule 2012 (the 2012 Rule)[2] established the current prudential framework, and was subsequently implemented by AEMO from November 2013.

The NEM is a gross pool; that is, with the purchase and sale of electricity occurring through a central trading platform, the spot market. AEMO acts as the principal in the settlement of transactions with MPs in the spot market. Settlement occurs up to five weeks after the liability accrues, which results in large amounts outstanding and gives rise to the need for a carefully managed prudential framework.

AEMO's obligation to settle payments due to MPs in relation to a billing period is limited to the extent of funds received from MPs in respect of that billing period (or

1 The retailer distributor credit support arrangements are currently being reviewed as part of the AEMC's consideration of a rule change request from AGL Energy. For more information on this rule change request, please refer to http://www.aemc.gov.au/Rule-Changes/Retailer-Distributor-Credit-Support-Requirements#.

2 AEMC, National Electricity Amendment (New Prudential Standard and Framework in the NEM) Rule 2012, 18 October 2012. Available from: www.aemc.gov.au.

provided under credit support arrangements). The relationship between AEMO and MPs is illustrated in the following diagram:[3]

Figure 2.1 Settlement of NEM transactions

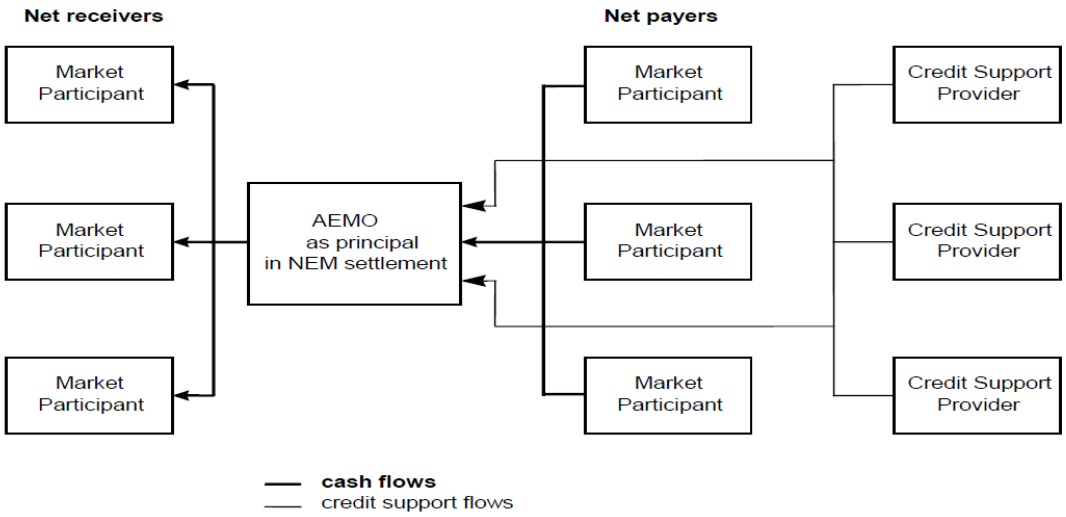


Figure 2.1 shows two types of MPs: net receivers (for example, generators) who are paid by AEMO, and net payers (for example, retailers) who pay AEMO. In addition, there are credit support providers who are not MPs but who provide credit support to AEMO in respect of the obligations of MPs. AEMO settles transactions between net receivers and net payers, paying net receivers with the funds received from net payers and, in the event of a net payer defaulting and being unable to pay, from credit support providers.

If a MP does not satisfy the acceptable credit criteria as defined under clause 3.3.3 of the Rules (and none of the current MPs satisfies those criteria), then that MP must provide AEMO with an unconditional guarantee in the form specified by AEMO from a credit support provider (such as a financial institution) that meets the acceptable credit criteria, but is not a MP. The unconditional guarantee must be for an amount that is greater than or equal to the MP's maximum credit limit (MCL). AEMO may call on that guarantee if payment by a MP is not cleared in time to meet a settlement deadline.

Any shortfall in AEMO's recovery from any MP in relation to a billing period is shared proportionately by MPs (typically generators) who are due payments in that billing cycle, in accordance with the Rules (clauses 3.15.22 and 3.15.23).

To satisfy the acceptable credit criteria,[4] amongst other things, a MP or a credit support provider must:

1. be an entity under the prudential supervision of the Australian Prudential Regulation Authority (APRA) or a central borrowing authority of an Australian State or Territory; and

2. have an acceptable credit rating that is either a rating of A-1 or higher for short term unsecured counterparty obligations of the entity, as rated by Standard and Poor's (Australia) Pty. Limited; or a rating of P-1 or higher for short term

3 AEMO, Credit Limit Procedures, version 2.0, 1 August 2014, p.6. Available from: www.aemo.com.au.

4 Refer to clause 3.3.3 and 3.3.4 of the Rules.

unsecured counterparty obligations of the entity, as rated by Moody's Investor Service Pty. Limited.

AEMO settles in excess of $11 billion worth of spot market transactions annually.[5] AEMO typically holds around $1.5 billion to $3.5 billion in bank guarantees.[6,7]

The Rules contain various provisions governing the prudential supervision of MPs, which are designed so that generators do not price the risk of non-payment into their bids.

2.3 The prudential standard

The 2012 Rule established the current prudential standard.[8] The 2012 Rule also modified the processes for calculating the maximum credit limit (MCL) and prudential margin (PM) to better reflect seasonal variability and individual load profiles in calculating these parameters. Section 2.4 provides a detailed explanation of the MCL and the PM (Appendix A also provides an explanation of these and other important terms used in the prudential framework).

The prudential standard is calculated as the Probability of Loss Given Default [P(LGD)], using a P(LGD) of 2% as the statistical- and probabilistic-based measure to define the prudential standard. This standard implies that the prudential arrangements will prevent any shortfall of monies collected by AEMO in 98 out of 100 instances of a MP defaulting. In the remaining 2% of cases, AEMO's inability to collect sufficient funds following that MP's default, may result in a payment shortfall to the remaining MPs who are net creditors in the market. Critically, the P(LGD) does not reflect the size of the potential losses that could occur in the 2% of cases. These potential losses are, instead, left to the creditor MPs – and their insurers and financiers – to estimate and manage.

The prudential standard is used by AEMO to calculate the prudential settings for every MP in the NEM. AEMO's approach to calculating each of these settings is explained in the Credit Limit Procedures, and a brief discussion of these settings is provided in Section 2.4. The objective of the Credit Limit Procedures is to establish the process by which AEMO will determine the prudential settings for each Market Participant so that the prudential standard is met for the NEM.[9]

AEMO intends that the application of the Credit Limit Procedures will meet the prudential standard on average, over time, with no systemic or persistent bias in the estimated MCL for any category of MPs. Given the nature of the estimate process used

5 $11.4 billion was traded in the NEM during 2012/13. For more details, see AEMO, Fact Sheet: The National Electricity Market

6 AEMC, Review into the role of hedging contracts in the existing NEM prudential framework, Final Report, 30 June 2010, Sydney.

7 State Treasury Corporations also guarantee the operation of some government-owned businesses in the NEM.

8 Prior to the 2012 Rule, AEMO was required to calculate the minimum amount of credit support required of each MP with reference to the "reasonable worst case," which was defined as a position that, while not being impossible, is to a probability level that the estimate would not be exceed more than once in 48 months.

9 Clause 3.3.8(b).

in the procedures, it can be expected that the prudential standard may not be met or may be exceeded from time to time.[10]

Under clause 3.3.8(f), AEMO is required to review, prepare and publish an annual report on the effectiveness of its methodologies in achieving the objective of the ensuring the prudential standard of 2% POE is met for the NEM. The most recent report, published in March 2015, found that the 2% prudential standard was met for 2014.[11]

2.4 Prudential settings in the NEM

The prudential settings for a MP are set out in clause 3.3.8 of the Rules and comprise the maximum credit limit (MCL), outstandings limit (OSL) and prudential margin (PM). These variables are detailed below.

2.4.1 Maximum credit limit (MCL)

A MP's MCL is the minimum amount of credit support it is required to provide to AEMO, for which there is no more than a 2% likelihood that, were this MP to default, its credit support would be insufficient to fully meet the liabilities it owes to other MPs.

For each and every MP, the MCL is calculated using the following formula (clause 3.3.8(k)):

MCL = PM + OSL

Where:

- MCL is the maximum credit limit;
- OSL is the outstandings limit; and
- PM is the prudential margin.

The OSL can be negative or positive, but both the PM and the MCL must be non-negative (ie, must be positive or zero). This means that, for a MP with a negative OSL – such as generators – they would need a sufficient amount of PM such that its MCL remains at least zero.

AEMO's methodology for calculating the MCL is set out in the Credit Limit Procedures and is shown in Figure 2.2.[12] The MCL is calculated by AEMO for each MP and for each region in which that MP has a market presence.

10 AEMO, Credit Limit Procedures, v 2.0, 1 August 2014, clause 4.2, p. 10. Available from: www.aemo.com.au.

11 AEMO, Report: Effectiveness of the NEM Prudential Settings Methodology, March 2015. Available from: www.aemo.com.au.

12 AEMO, Credit Support Procedures, v 2.0, 1 August 2014. Available from: www.aemo.com.au.

Figure 2.2 AEMO's approach to calculating the MCL[13]

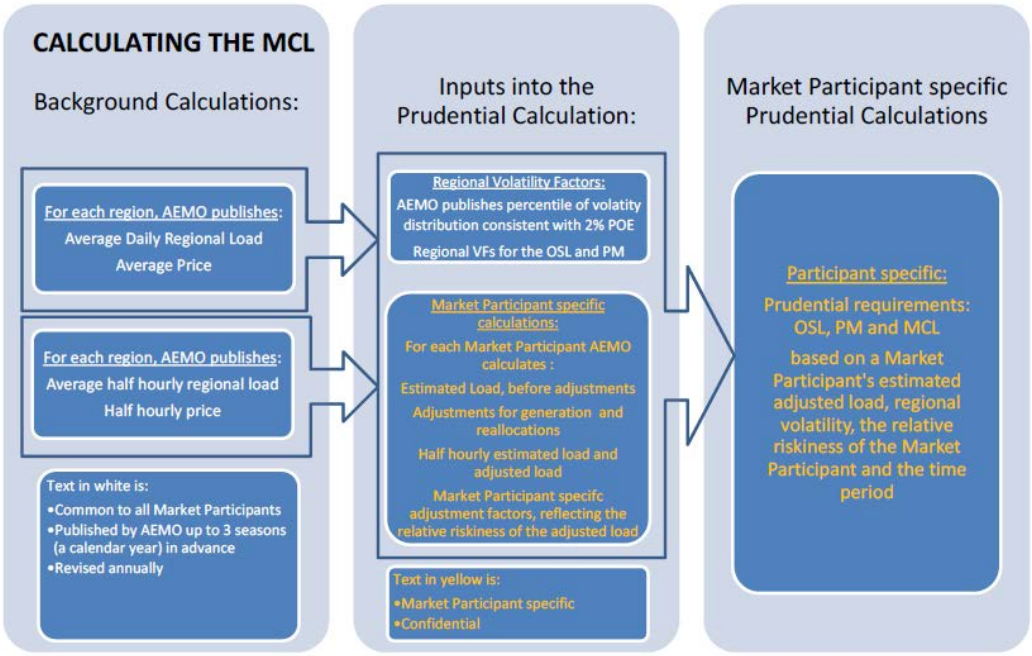


Figure 2.2 shows the three steps used by AEMO in calculating each MP's MCL:

1. 'Background Calculations' – these calculations are for region-specific parameters, like the regional reference price (RRP);
2. 'Inputs into the Prudential Calculation' – these are based on both regional parameters, such as the volatility of the RRP ('Regional Volatility Factors') and MP-specific parameters like estimated loads in the region; and
3. 'MP specific Prudential Calculations' – from the prior two steps, AEMO calculates the OSL and PM, and therefore the MCL, for each MP.

In determining these calculations, clause 3.3.8(d) allows AEMO to consider any other factors relevant to these calculations, as per its Credit Limit Procedures.

2.4.2 Outstandings limit (OSL)

The OSL was a new variable introduced into, and defined in, the 2012 Rule. The OSL is AEMO's estimate of the maximum value that a MP's liabilities (or 'outstandings') can reach over the payment period if the MP has provided credit support equal to its MCL. The purpose of the OSL is to 'cap' the total outstandings (OS) of the MP, with breaches of this cap requiring the MP to provide additional credit support.

In this way, the OSL provides for the NEM to not be exposed to a prudential risk that is inconsistent with the prudential standard.

The OSL is used to calculate the MCL in conjunction with the PM, and was designed to distinguish from the pre-existing Trading Limit, which was retained in the Rules.

13 AEMO, Credit Support Procedures, v 2.0, 1 August 2014, p. 9. Available from: www.aemo.com.au.

2.4.3 Prudential margin

The PM is set at an amount that is expected to cover the liabilities accrued by the MP from the time that a Call Notice is issued (discussed in Section 2.6) to that MP, to the time that the MP is suspended from the NEM. For the purposes of calculating the PM, this period is taken to be 7 days and is defined (see clause 3.3.1A) as the reaction period.

In effect, the PM acts as a "buffer" to cover the potential loss that may occur between a MP defaulting and its suspension from the NEM. The PM cannot be less than zero.

The PM for each MP is calculated by AEMO as the sum of the PM for the MP's trading amounts and reallocation amounts, that is:

$PM = PM_{\text{trading amounts}} + PM_{\text{reallocation amounts}}$

Where:

- $PM_{\text{trading amounts}}$ is a function of aggregate trading amounts; and
- $PM_{\text{reallocation amounts}}$ is a function of aggregate reallocation amounts.

Trading amounts are defined in the Rules as the positive or negative dollar amount resulting from a transaction.[14] Generally for a retailer, the trading amount is negative, and for generators, it is positive. Reallocation amounts are defined in the Rules as the positive or negative dollar amount in respect of a reallocation transaction being an amount payable to (for a positive reallocation amount) or by (negative reallocation amount) the MP.

The meaning of, and rationale for, 'reallocations' are detailed in Section 2.5, after the interaction between the key elements of the prudential settings in the NEM has been outlined.

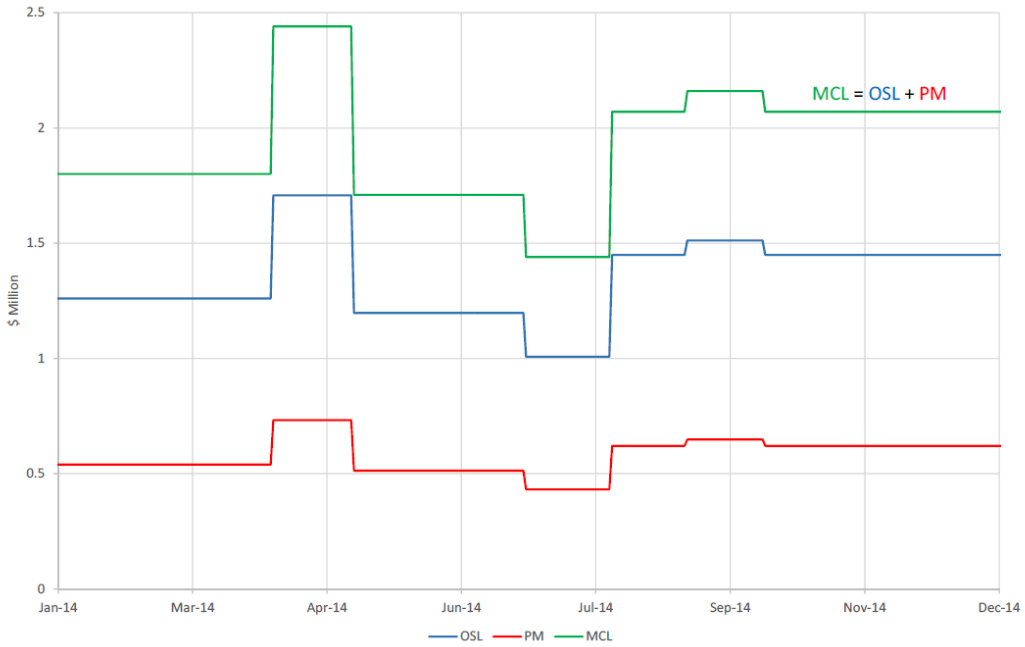
2.4.4 Relationship between the MCL, OSL and PM

The relationship between the MCL, OSL and PM is shown in Figure 2.3, using the example of a hypothetical MP during the 2014 calendar year.

In this example, during April 2014, high spot prices in the NEM, meant the MP's MCL increased by approximately $700,000 (from $1.7 million to $2.4 million). Of this, $500,000 came from the OSL, and $200,000 from the PM. Likewise, in July 2015, the MCL decreased by approximately $300,000 with related decreases of about $250,000 and $50,000 in the OSL and PM, respectively.

14 The Rules define a transaction as either spot market transaction, reallocation transaction or any other transaction either in the market or to which AEMO is a party.

Figure 2.3 Relationship between the OSL, PM, and MCL



The prudential settings are assessed and varied by AEMO regularly. Each MP has access to its own online prudential dashboard which provides real-time information on its prudential settings. The information displayed on the dashboard provides MPs with access to information to make trading and prudential decisions. This information is used by AEMO to make its calculations of the prudential settings for that MP. For generators, the dashboard provides information about their accrued financial position with AEMO.[15]

2.4.5 Trading limit

The trading limit is the maximum amount that a MP's outstandings are allowed to reach before AEMO issues a call notice under clause 3.3.11. The purpose of the TL is to minimise the risk that a MP incurs liability to AEMO in excess of the amount of security AEMO holds for that MP. The TL acts as a cap on the amount owing by a MP to AEMO. MPs are required to monitor their amount owing and to provide additional security to AEMO immediately if a breach of the TL occurs.

Figure 2.4 illustrates the relationship between the dollar amount of credit support (vertical axis), the MCL (purple line), TL (orange line), the typical accrual (TypA),[16] and the level of outstandings (OS, blue line), for a hypothetical MP.

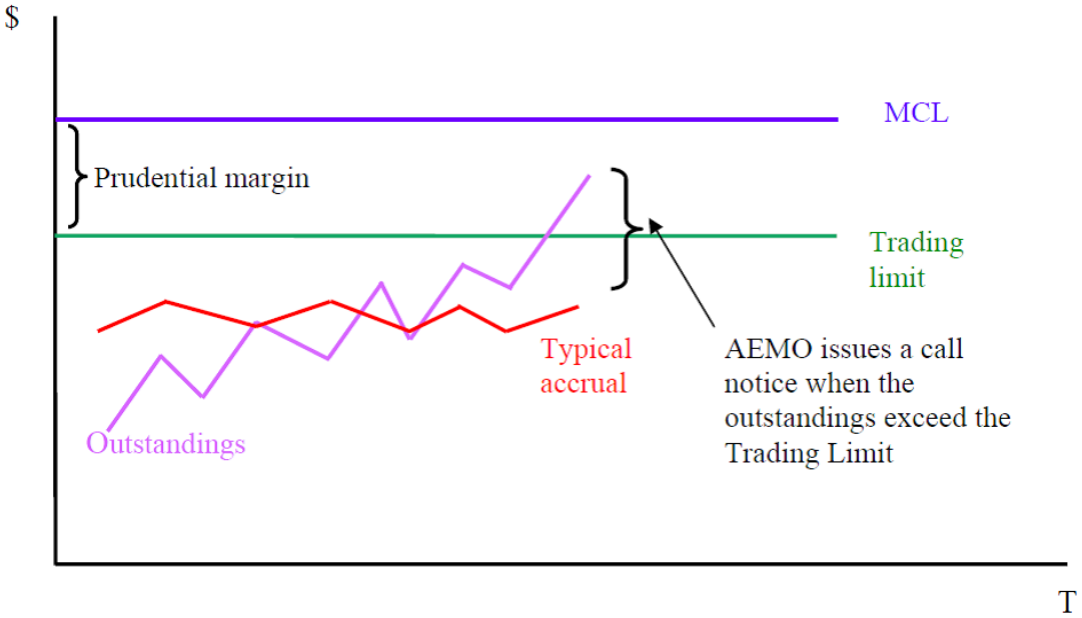
In this stylised figure, the level of credit support is set equal to MCL, which is a sufficient amount of credit support as long as the level of outstandings (OS) is less than the TL – which is initially the case. In practice, it is typically the case that the level of

15 AEMO, Prudential Dashboard Support Information, 1 December 2010. Available from: www.aemo.com.au.

16 Typical accrual is defined in Clause 3.3.12 of the Rules. It is an amount which AEMO determines would have been the outstandings of the MP if spot prices, ancillary service prices and trading amounts of the MP had been at average levels.

credit support provided by MPs is equal to their MCL, provided their OS remains no higher than their TL.

Figure 2.4 The TL, OS and MCL



The figure shows that, as time passes (horizontal axis), the OS gradually increases until it exceeds the TL. At this point, a call notice may be issued by AEMO under clause 3.3.11(a)(2), requiring the MP to provide additional credit support.[17] The amount of additional credit support is the higher of OS less TypA, and OS less TL. This additional credit support, if provided by the MP, is sufficient to raise the TL back above OS, and therefore satisfy the prudential standard for this hypothetical MP.

2.5 Reallocation arrangements

The gross pool nature of the NEM, in conjunction with hedging arrangements in place between MPs, gives rise to circular cash flows. Using the example of a retailer-generator transaction, for the same payment period:

- the retailer pays AEMO for energy consumed;
- AEMO pays the generator for energy generated; and
- the generator and retailer exchange cash representing the settlement obligations under the hedging contracts (often referred to as difference payments).

The retailer's MCL is based on its gross pool liability, whereas its actual liability – taking into account, for example, swap contracts with generators – would be based on the strike prices of those contracts.

17 AEMO has established a further, informal step in the daily monitoring process in addition to the formal procedure described in clause 3.3.11. Under this additional step, AEMO advises NEM Participants at about 8.30 am if their outstandings from the previous day exceeded their TL. This then provides those NEM Participants with the opportunity to pay a security deposit (or register a RA or provide a bank guarantee) equal to the difference by 10.30am, and thereby avoid the need for a call notice to be issued.

A reallocation arrangement[18] (RA) is a Rules-supported (clause 3.15.11) financial arrangement between two MPs, supported by an off-market trading relationship (including, but not limited to, a hedging contract) between two MPs. An RA can serve up to two purposes:

1. Avoid circular cash flows, and therefore minimise the associated settlement risk, between the MPs and AEMO, by allowing the off-market commitment (for example, a hedging contract) to be netted against pool settlement.
2. Provide credit support relief – by lowering the MCL – to a MP who has an existing hedge contract in place.

Box 2.1 outlines the rationale for hedging in the NEM, and provides examples of the types of hedging contracts that are used. The hedging contracts mentioned are examples of off-market commitments that underpin RAs.

Box 2.1 Hedging in the NEM[19]

The NEM spot market price can be highly volatile[20] ranging between minus $1,000/MWh (price floor) and $13,800/MWh (price cap).[21]

Both generators and retailers are exposed to these price fluctuations. For example, when the spot price is high the generator recoups its investments, while the retailer is required to pay an amount for electricity above the agreed price of supply to its customers (ie, a "bad" outcome for the retailer is a "good" outcome for the generator). Similarly, in the reverse situation, a low spot price can be a "bad" outcome for generators, but a "good" outcome for retailers.

In order to manage these risks, the two parties may agree to a hedging contract that effectively sets the price in advance for a given quantity of electricity. There are a range of hedging products to the parties, including:

- a base load swap: a contract to trade a fixed amount of electricity for a certain price at all times in a day;
- a peaking swap: a contract to trade a fixed amount during fixed times of the day (eg, 7.00am to 10.00pm), on specific days;
- a flat cap: a contract that gives the holder the option to buy a given amount of electricity at an agreed price (strike price); and
- a peaking cap: a contract that gives the holder the option to buy a given amount of electricity at an agreed price, during peak hours;

18 For the sake of simplicity, we use the term 'reallocation arrangement' to describe either: a reallocation; a reallocation request; or a reallocation transaction. The term 'reallocation arrangement' is not defined in the Rules.

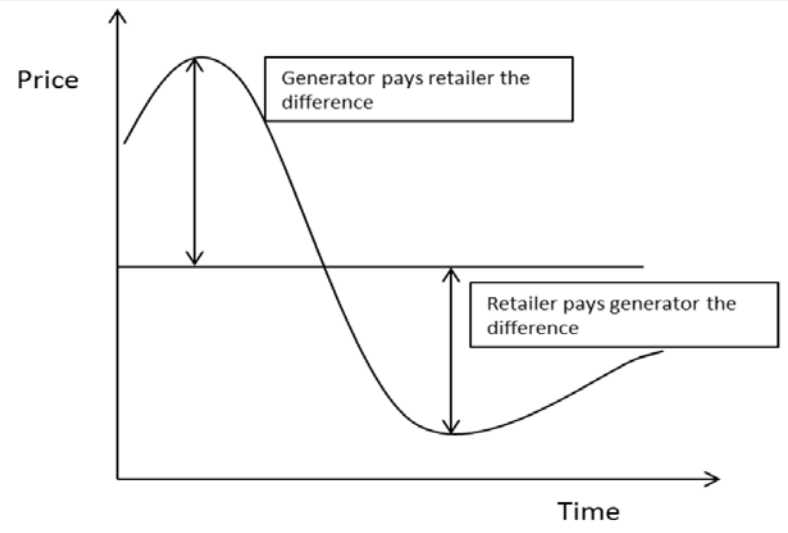
19 This discussion is drawn from Productivity Commission, Electricity Network Regulation, Inquiry Report, pp. 837-838. Available from: www.pc.gov.au.

20 Factors driving the price volatility can be seasonal demand, unintended plant outages, extreme weather events and network constraints.

21 AEMC, Schedule of Reliability Settings - Calculation of 2015-16 Financial Year, 12 February 2015. Available from: www.aemc.gov.au.

Figure 2.5 provides a simplified example of a hypothetical generator-retailer base load swap, where the energy price is fixed.

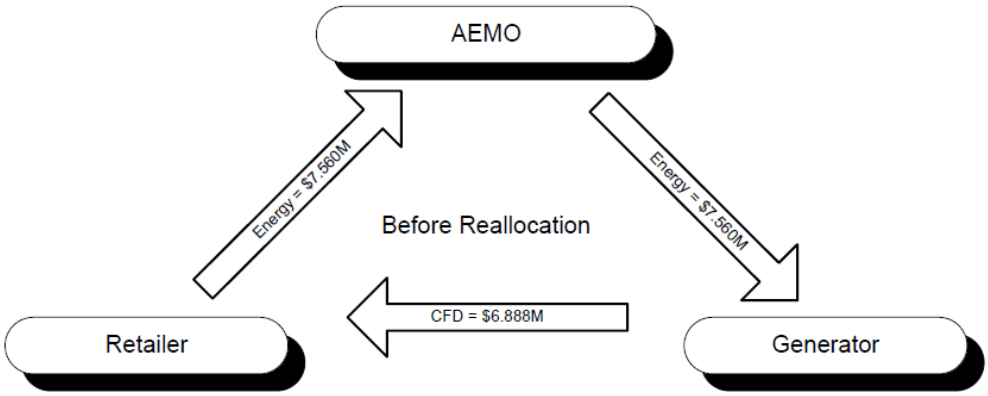
Figure 2.5 A simplified base load swap



To detail how RAs avoid circular and potentially volatile cash flows – thereby minimising the associated settlement risks for AEMO and MPs – consider the example in Figure 2.6 of a hypothetical retailer and generator, who enter into a base load swap. The strike price is assumed to be $40/MWh, the average weekly pool price is assumed to be $450/MWh and load for that week is assumed to be 16,800 MWh. Therefore, the AEMO pool settlement is $7,560,000 ($450 x 16,800).[22]

In Figure 2.6, there is no reallocation arrangement registered with AEMO. Consequently, the retailer must pay AEMO the full settlement amount of $7,560,000 and AEMO must pay the generator $7,560,000. The generator must then pay the retailer the contract for difference amount of $6,888,000 (being the balance of the pool price, less the agreed price of $40/MWh: $7,560,000 - (16,800 x ($40 - $450) = -$6,888,000).

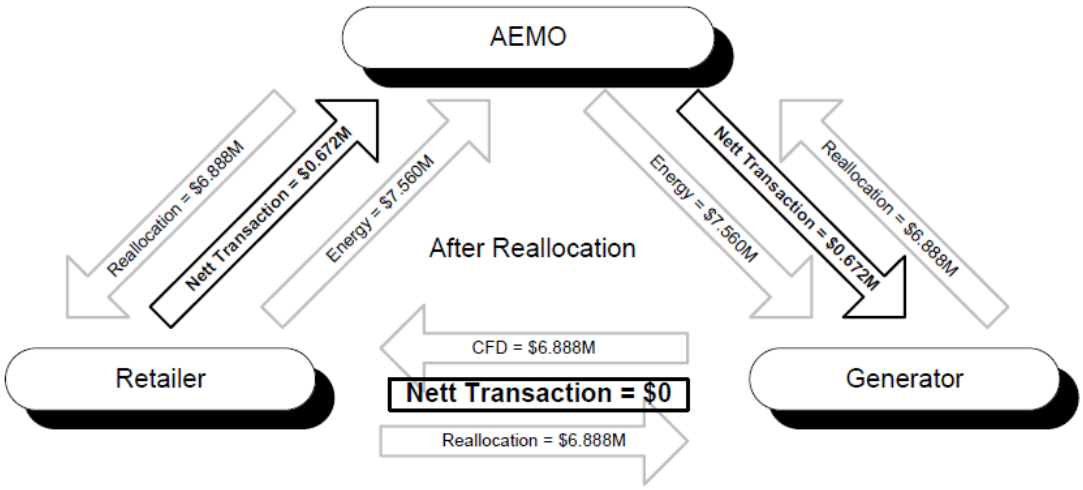
Figure 2.6 Circular cash flows in the NEM settlement: no reallocation agreement registered



22 This example, and associated images, is taken from AEMO, Reallocation Procedure: Energy and Dollar Offset Reallocations, v. 2.1, 5 May 2011, pp. 11-13. Available from: www.aemo.com.au.

In contrast, in Figure 2.7 a reallocation arrangement reflecting the agreement between the parties has been registered with, and approved by, AEMO. In this situation, a credit is allocated against the retailer's trading amount ($6,888,000) and a debit against the generator's trading amount (-$6,888,000). The AEMO pool settlement is reduced to $672,000 ($7,560,000 - $6,888,000), and so the retailer pays AEMO $672,000 and AEMO pays the generator $672,000.

Figure 2.7 Circular cash flows in the NEM settlement: reallocation agreement registered



To begin the RA registration process, MPs jointly submit a reallocation request to AEMO, usually a retailer and a generator. According to clause 3.15.11(d) the reallocation request must:

1. contain the information required by the reallocation procedures; and
2. be lodged with AEMO in accordance with the reallocation procedures and the timetable for reallocation requests as published by AEMO from time to time (the reallocation timetable).

Reallocation requests may be submitted either before a specified trading interval has occurred (referred to as a "prospective reallocation" or "ex-ante reallocation") or after the specified trading interval has occurred (referred to as an "ex-post reallocation"). Prospective reallocations are currently used by around 25% of MPs.[23]

Once registered, the RA can be used to reduce each of the two MPs' settlements amounts with AEMO via a reallocation transaction. A reallocation transaction is defined in clause 3.15.11(a) of the Rules as follows:

> "A reallocation transaction is a transaction undertaken with the consent of two MPs and AEMO under which AEMO credits one MP with a positive trading amount in respect of a trading interval, in consideration of a matching negative trading amount debited to the other MP in respect of the same trading interval."

23 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 6. Available from: www.aemc.gov.au.

While both prospective and ex-post reallocations can be used to reduce circular cash flows, only prospective reallocations can provide credit support relief. Prospective reallocations submitted according to AEMO's ex-ante timetable can be included in the determination of a MP's MCL under the Rules.

For reallocation requests related to prospective reallocations, AEMO's reallocation procedures stipulate that the party submitting the request must confirm there is a contractual arrangement between the credit and debit party which underpins the reallocation for the entire period of the reallocation request. If the contractual arrangement is terminated during the period of the reallocation request, the party who submitted the request must immediately notify AEMO that they require the request to be deregistered in accordance with clause 3.15.11(f) of the Rules.

This stipulation reflects the recommendations made by the Commission in its June 2010 Review into the role of hedging contracts in the existing NEM prudential framework (referred to as the Hedging Review).[24] At the time of the Hedging Review, the Rules did not require MPs to confirm that an underlying contract existed prior to registering a RA. AEMO's procedures for offset arrangements at that time also did not explicitly require such confirmation.

In the absence of an underlying contract between the parties to a prospective reallocation, there was, and remains, a concern that AEMO could, in effect, assume the role of clearing and settling a financial contract rather than, as intended, reflecting an existing hedge contract in the determination of the MCL and in the NEM settlement process.

In light of this and other considerations, the Commission concluded that there should be an explicit requirement under the Rules that prospective reallocations be underpinned by underlying contracts. Further, an obligation in the Rules to this effect would allow the Australian Energy Regulator (AER) to monitor and enforce compliance with this obligation.

Clause 3.15.11(b) of the Rules provides for AEMO to specify the permitted types of reallocation transactions. It states that "[r]eallocations transactions may be of any type permitted in the reallocation procedures." AEMO's reallocation procedures permit two broad types of reallocation transactions:

1. Energy Offset – also referred to as a MWh or quantity-based offset, this reallocation specifies a half-hourly energy profile, and uses the half-hourly regional reference price for the nominated region to determine a trading amount for each trading interval. This is mainly used as a prospective reallocation, where there is an underlying contract which is specified as an energy quantity.
2. Dollar Offset – this reallocation specifies a dollar amount (usually a single value) which is used directly to determine the trading amount. This is used primarily, though not necessarily exclusively, as an ex-post reallocation.

Continuing the example of a retailer-generator off-market commitment, an Energy Offset RA can be used to reduce the retailer's outstandings in the NEM (by crediting the

24 AEMC, Review into the role of hedging contracts in the existing NEM prudential framework, Final Report, 30 June 2010. Available from: www.aemc.gov.au.

retailer's account) to reflect the energy under the RA. At the same time, the revenue owed to the generator would be reduced (by debiting the generator's account) by the same amount. The retailer and generator bilaterally settle for the energy under the RA, outside the NEM.

While ex-post reallocations cannot be directly used to provide credit support relief, they can still impact a MP's level of credit support. An ex-post reallocation can reduce a MP's level of OS and therefore reduce the risk that its OS exceeds its TL, reducing, in turn, the chance of this MP being issued a call notice. Ultimately, an ex-post reallocation can reduce the possibility of this MP being suspended from the NEM, avoiding potential flow-on market disruption for all MPs.

2.5.1 Reallocation arrangements and the MCL

Prospective reallocations can provide credit support relief to a MP in two ways:

1. by reducing its OSL; and
2. by reducing its PM.

Regardless of the type of MP, prospective reallocations – if entered into by a MP – can be used to lower that MP's OSL. This can be done in three forms:

1. positive reallocation amounts can be offset against negative reallocation amounts;
2. positive trading amounts can be offset against negative reallocation amounts; and
3. negative trading amounts can be offset against positive reallocation amounts.

In addition, within the trading account, positive trading amounts can be offset against negative trading amounts, a feature which provides credit support relief for a MP even when they have no RAs.

As reallocations can be used to reduce circular, and potentially volatile, cash flows, the risk to the NEM from a MP defaulting is reduced. To reflect this reduced risk to the NEM, the Rules allow for reallocations to reduce the amount of credit support – via the OSL - provided by MPs to AEMO.

In contrast, when calculating the PM, the Rules – in particular, clause 3.3.8(e) – do not permit the second and third form of offsetting.[25] While clause 3.3.8(e) applies to all MPs, AEMO is of the view that, in practice, it creates a potential inconsistency in the calculation of the PM between different types of MPs. In particular, as discussed in the Proponent's rule change request,[26] there is an inconsistency in the calculation of the PM between, on the one hand, so-called 'gentailers' (see Box 2.2) and, on the other, (standalone) generators and retailers.

25 The first form – offsetting positive and negative reallocation amounts – is still permitted, as is the offsetting of positive and negative trading amounts, in the calculation of the PM.

26 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 6. Available from: www.aemc.gov.au.

Box 2.2 What is a 'gentailer'?

A gentailer is a vertically-integrated MP with market share in both generation and retail businesses in the NEM. As both the buyer (Retailer) and seller (Generator) of electricity, gentailers may be able to internally hedge and manage volatility in spot prices and thus limit the need to use externally provided hedging contracts.

In its May 2015 rule change request, the Proponent notes that, in the calculation of the PM, restricting offsets between trading and reallocation amounts has existed since the time the PM was introduced in 2007.[27] The Proponent states that this restriction no longer has a clear reasoning and:[28]

> "should have been amended as part of the [National Electricity Market Amendment (New Prudential Standard and Framework) Rule 2012], but was missed due to an oversight."

Chapter 3 discusses in detail the rationale for the Proponent's rule change request.

Question 1 Restricting trading and reallocation amount offsets

Do stakeholders agree that this restriction no longer has any clear reasoning? If so, why? If not, why not?

2.6 The default process in the NEM

Briefly, as illustrated in Figure 2.4 when a MP's outstandings exceeds its trading limit, AEMO may issue a Call Notice requiring the MP to provide additional security.

If the MP fails to respond to the Call Notice in the time permitted under the Rules, AEMO may issue a Default Notice.

If the MP fails to respond, or responds inadequately, to the Default Notice, AEMO may issue a Suspension Notice,[29] notifying the MP of the date and time from which it will be suspended from trading in the NEM.

The default process is set out in more detail in Appendix B.

27 The prudential margin was introduced in the National Electricity Amendment (Reallocations) Rule 2007 No. 1

28 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 4. Available from: www.aemc.gov.au.

29 Clause. 3.15.21(c)).

3 Summary of AEMO's rule change request

In its rule change request, AEMO is seeking to remove clause 3.3.8(e)[30] which restricts offsetting of trading and reallocation amounts in the PM. Under clause 3.3.8(e), when determining the PM, AEMO must not take into account estimates of a MP's:

- quantity and pattern of trading amounts where the estimate of the aggregate of all trading amounts for the period being assessed is a positive amount; and
- quantity and pattern of reallocation amounts where the estimate of the aggregate of all reallocation amounts for the period being assessed is a positive amount.

To understand the impact of clause 3.3.8(e), consider the example presented in Section 2.5. This retailer has a negative trading amount (reflecting its purchase of electricity). Using the example of the RA presented in Section 2.5, this retailer has a positive reallocation amount, as there is an amount payable to it by virtue of the contracted price ($40/MWh) being lower than the pool price ($450/MWh). It is assumed here that this RA is a prospective reallocation. For the sake of simplicity, it is also assumed there are no other market or off-market transactions involving this retailer.

This RA can be used to lower the retailer's settlement payments; the retailer's reallocation amounts can be netted against its pool settlement liability. Furthermore, by virtue of being a prospective reallocation, this RA can be used to lower this retailer's OSL since, offsetting between reallocation and trading amounts is permitted.

However, despite being a prospective reallocation, this RA cannot be used to lower this retailer's PM. In applying clause 3.3.8(e), the retailer's positive reallocation amount cannot be used to offset its negative trading amount. Consequently, the retailer's PM is higher than would be the case if the retailer's reallocation and trading amounts could be offset.

As this example illustrates, this retailer's MCL – which is the sum of its OSL and its PM – would be higher, under the existing Rules, than if clause 3.3.8(e) were not operational. In the absence of clause 3.3.8(e), and using the above example, both the OSL and PM of this retailer would be lower (provided the PM remained non-negative).

The rule proposed by AEMO, if made, would allow AEMO to offset a MP's trading amounts and reallocation amounts when determining the prudential margin for that MP, and therefore reduce both the OSL and the PM of this MP.

30 The rule change request also seeks to make a minor consequential amendment to clause 3.3.8(d) to remove the reference to clause 3.3.8(e).

3.1 Rationale for the rule change request

In the rule change request, AEMO provides its rationale for the rule change. Briefly, AEMO considers that removing clause 3.3.8(e) will reduce MP's credit support requirements and, as a result will deliver the following benefits:

- enhanced competition by reducing barriers to entry for smaller MPs;
- efficient operation of the prudential framework through efficient use of MP collateral;
- reduced consumer costs through reduced prudential costs for MPs; and
- reduced credit support requirements whilst maintaining the NEM prudential standard.

3.2 Issues raised in the rule change request

In its rule change request, AEMO raises two primary issues with the current restriction in clause 3.3.8(e) that applies to offsets in between trading amounts and reallocation amounts in the prudential margin:

- the impact on competition, as the restriction affects MP's using reallocations, but does not affect them equally; and
- the current rule results in an inefficient use of (some) MP's collateral.

Both of these issues are discussed further below.

3.2.1 Impact on competition

According to the Proponent, removing clause 3.3.8(e) to allow for offsetting between trading amounts and reallocation amounts in the PM calculation will remove the unequal treatment of MPs with equivalent financial exposure in the NEM, as well as the unequal treatment between the calculations of the OSL and the PM, for each MP. AEMO further considers that removing clause 3.3.8(e) will:[31]

> "enhance competition through reducing barriers of entry, specifically for smaller MPs who do not have generation capacity to offset load and who currently face higher relative costs for obtaining credit support to their larger, vertically integrated competitors."

According to the Proponent, for those MPs who use reallocations, the impact of clause 3.3.8(e) differs depending on the type of MP. Figure 3.1, taken from the Proponent's rule change request, shows the different treatment of offsets when calculating the prudential margin for the following four hypothetical MPs:

1. gentailer (panel a in the figure));
2. reallocator (panel b in the figure)) – this MP is neither a generator nor a retailer. Instead, they enter into hedging contracts with the other three MP types. Reallocators are generally large financial institutions (for example, banks);

31 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 19. Available from: www.aemc.gov.au.

3. (standalone) retailer (panel c in the figure)); and

4. (standalone) generator (panel d in the figure)).

The following can also be noted about the stylised example in Figure 3.1:

- the gentailer has the same 120 MWh load as the standalone retailer;
- the gentailer has the same 100 MWh generation as the standalone generator;
- the gentailer hedges its risk internally; that is, it has no reallocation amounts. Consequently, its PM is based on its 20 MWh net load;[32]
- the standalone retailer hedges its 120 MWh exposure by entering into a hedge contract with a reallocator, for 100 MWh. Though the retailer's exposure to the NEM is reduced to 20 MWh, its PM is based on its entire 120 MWh load by virtue of clause 3.3.8(e);
- the standalone generator, who has an existing hedge contract with this same reallocator for 120 MWh, is able to reduce its exposure to the NEM to 20 MWh, by offsetting this reallocation amount with its 100 MWh exposure. Though the generator's exposure to the NEM is reduced to 20 MWh, its PM is based on its entire 120 MWh reallocation amount by virtue of clause 3.3.8(e); and
- the reallocator has no trading amounts, reflecting its sole role as a hedge provider. Consequently, its PM is based solely on its net reallocation amount (20 MWh).

According to AEMO, in this stylised example, the aggregate PM (280 MWh) is higher than would be the case if the PM was based on these MPs' net exposures in the NEM (according to AEMO, this would be 80MWh).

Furthermore, as discussed in section 2.5.1, AEMO's view is that the operation of clause 3.3.8(e) means that the PM for one MP type may differ from another MP type, even if both MPs have the same economic exposure.[33]

On the basis of Figure 3.1, AEMO argues in its rule change proposal that clause 3.3.8(e) confers an advantage to Gentailers compared to standalone retailers and generators. AEMO argues that those standalone retailers and generators who have the same financial exposures in the NEM as a gentailer, but who rely on reallocation amounts (due to their use of externally-provided hedging contracts), are unable to offset these amounts in a manner that reduces their PM, thereby incurring a higher cost of providing credit support, than their vertically integrated competitors, placing them at a competitive disadvantage.[34]

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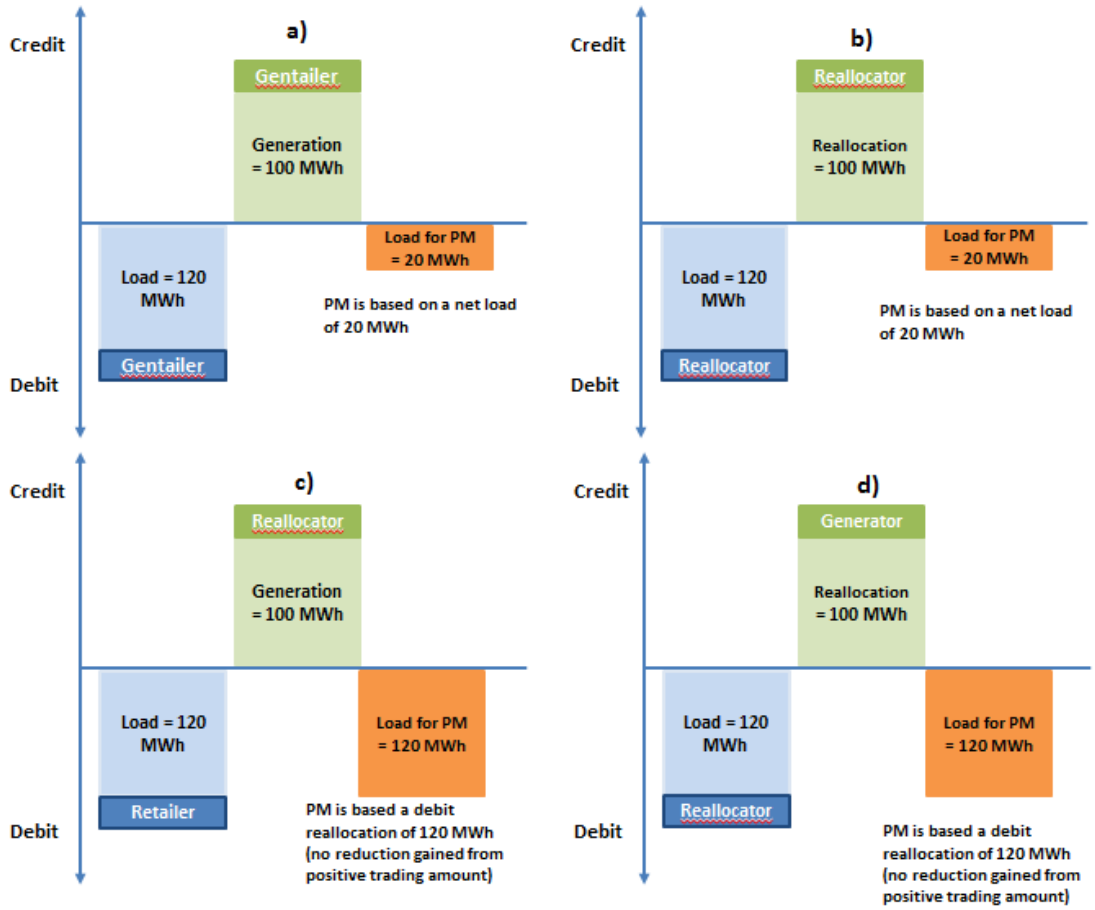
32 It should be noted that, were this gentailer to have a debit reallocation amount – that is, if its hedging contracts were with an external counterparty – it would be prevented, by clause 3.3.8(e), from offsetting these amounts in the calculation of its PM.

33 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 10. Available from: www.aemc.gov.au.

34 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 19. Available from: www.aemc.gov.au.

Figure 3.1 Stylised example of PM calculations under existing Rules[35]



Note: for the purposes of this figure, MWh and $ reallocations are treated the same for the PM calculation.

3.2.2 Inefficient use of MP collateral

Under the existing Rules, trading and reallocation amounts can be offset against each other when calculating the OSL, but not when calculating the PM. This means that, for those MPs with both trading and reallocation amounts, their PM (and therefore their MCL and their level of credit support) is higher than would be the case if trading and reallocation amounts could be offset against each other for both the OSL and the PM (provided the PM remained non-negative).

The Proponent, in its rule change request, argues that adopting its proposed rule does not lead to a breach of the prudential standard. Consequently, the Proponent argues that the current Rules lead to an allocatively inefficient outcome.[36] In the context of the prudential standard, an inefficient outcome is one where the benefits provided by the credit support – principally, the reduced settlement risks to the NEM in the event of a

35 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 10. Available from: www.aemc.gov.au.

36 Allocative inefficiency is an outcome where a resource is not allocated to its best use. In the context of the prudential standard, the 'resource' is the amount of credit support.

MP's default - are not equal to the costs (both explicit and implicit) incurred in providing that credit support.[37]

To support its argument, AEMO estimates that, across all MPs in the NEM, the current level of credit support is around $12 million higher than it would be under AEMO's proposed rule. This translates to an additional cost of $200,000-$500,000 per year (based on an estimated annual cost of credit support of 1.5%-4.0% p.a.) across the NEM. Furthermore, under AEMO's proposed rule, the prudential standard is maintained. AEMO's estimates were based on a specific time period – 2 December 2013 to 31 March 2014 – and are shown in Figure 3.2 and Figure 3.3.

Figure 3.2 AEMO's modelling results (summer 2014)[38]

Variable	Value
Total MCL collected	$920 million
OSL	$590 million
PM (current)	$330 million
PM (proposed)	$266 million
Total MCL savings	$12 million
% savings in MCL	1.3%
Savings (cost of credit 1.5%)	$200,000 per year
Savings (cost of credit 4.0%)	$500,000 per year

In Figure 3.2, aggregate MCLs across all MPs, under existing Rules and for the selected time period, was $920 million, of which $590 million was the OSL and $330 million was the PM. Under AEMO's proposed rule, the aggregate MCL falls to $908 million, a $12 million reduction.

In calculating the aggregate PM under the proposed rule, and for the purposes of the simulation, AEMO allowed for the proposed rule to result in negative PMs for some MPs. However, in practice, as the PM for each and every MP must be non-negative, applying this constraint results in the MCL falling by less than the $64 million decline in the PM.

37 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 16. Available from: www.aemc.gov.au.

38 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 16. Available from: www.aemc.gov.au.

Figure 3.3 AEMO's probability of exceedance (POE) analysis[39]

	Current rule	Proposed rule
NEM MCL reduction	0	$12 million
POE – NSW	1.8%	1.8%
POE – QLD	1.8%	1.8%
POE – SA	1.8%	1.8%
POE – TAS	1.7%	1.7%
POE – VIC	1.8%	1.8%

By reducing the amount of credit support required, without breaching the prudential standard, AEMO considers that the efficiency of the prudential framework and the operation of the NEM are improved.

3.3 AEMO's proposed solution

AEMO proposes to remove clause 3.3.8(e) from the NER and in doing so, remove the restriction that applies to offsetting between trading amounts and reallocation amounts in the PM. In its rule change request, AEMO notes that this restriction was established under the National Electricity Amendment (Reallocations) Rule 2007 No. 1, when the PM and MCL were independent of each other. AEMO argues that there is no longer a clear reasoning for this restriction.

Figure 3.4 shows the effect of AEMO's proposed rule on the four MPs presented in the stylised example from Figure 3.1, according to AEMO. The generation, load, and reallocation amounts from Figure 3.1 are repeated in Figure 3.4. Using the stylised example in Figure 3.4, the effect of the proposed rule, according to AEMO, can be summarised as follows:

- the proposed rule has no impact on the gentailer (panel a in the figure)), as, for the purposes of the stylized example in Figure 3.1 and Figure 3.4 the gentailer has only trading amounts;
- the proposed rule has no impact on the reallocator (panel b in the figure)), as, for the purposes of the stylized example, the reallocator has only reallocation amounts;
- the proposed rule results in a lower PM for each of the (standalone) retailer (panel c in the figure)) and generator (panel d)), of 20 MWh, compared to 120 MWh for each of these MPs, in Figure 3.1; and
- in this stylised example, the proposed rule results in an aggregate PM of 80 MWh, compared to 280 MWh, under the existing Rules, in Figure 3.1.

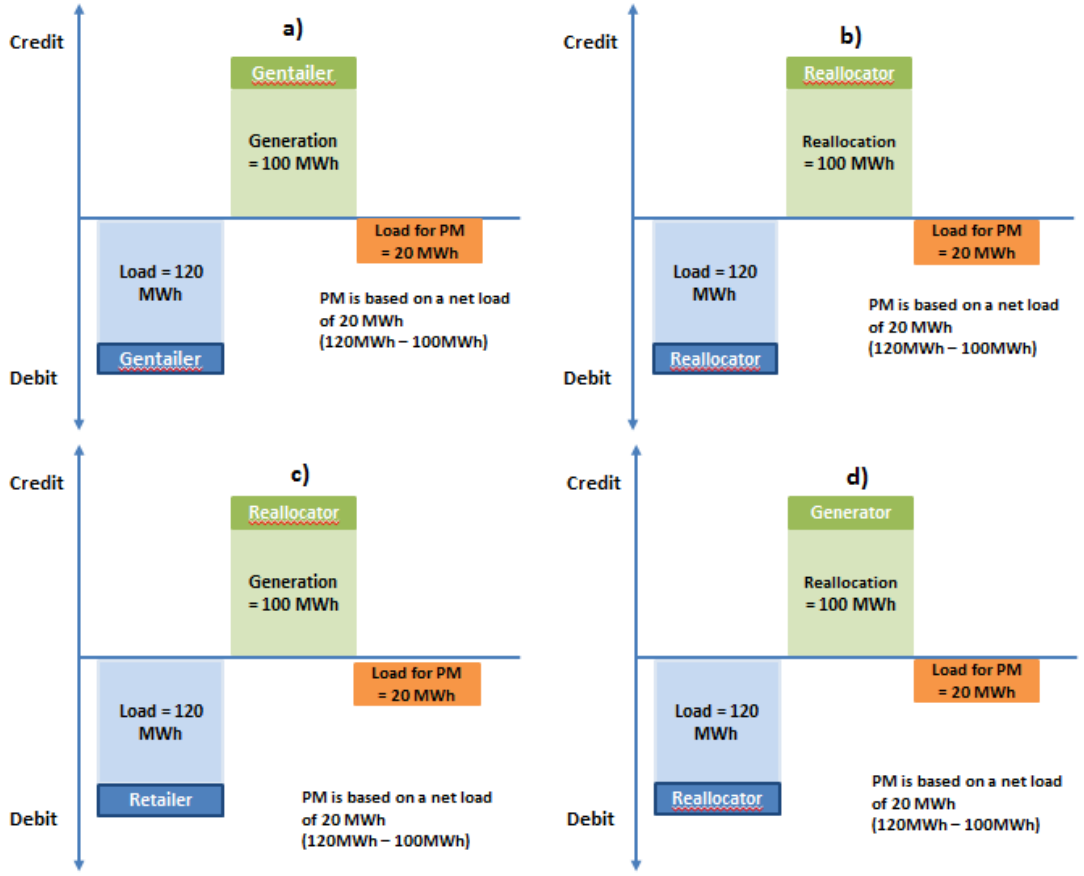
Although clause 3.3.8(d) provides AEMO with some discretion in relation to developing the methodology to determine the prudential settings to apply to MPs. In

39 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 17. Available from: www.aemc.gov.au.

particular, this discretion includes the extent to which AEMO takes account of prospective reallocation amounts in the calculation of the PM:

> "Clause 3.3.8(d): subject to paragraph (e) [which is proposed to be removed], in developing the methodology to be used by AEMO to determine the prudential settings to apply to Market Participants, AEMO must take into consideration the following factors: (6) any prospective reallocations for the period being assessed."

Figure 3.4 Stylised example of PM calculations under the proposed Rule[40]



3.4 Costs and benefits of implementation

In the rule change request, AEMO identifies implementation costs of $100,000 for system changes, including design, development, testing and deployment. AEMO has not identified any costs to MPs associated with implementing its proposed rule change.

As discussed in section 3.2.2, AEMO estimates the financial impact of the proposed rule change is a reduction in total MCL requirements across the NEM of $12 million (aggregate saving of $200,000 to $500,000 per year for MPs who use reallocations).

40 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 13. Available from: www.aemc.gov.au.

4 Assessment Framework

This chapter sets out the requirements under the National Electricity Law (NEL) that the AEMC must satisfy in considering the rule change request and provides a proposed approach for assessing the rule change request. This chapter identifies a number of issues for consultation relevant to this rule change request. Stakeholders are encouraged to comment on these issues as well as any other aspect of the rule change request or this consultation paper including the proposed assessment framework.

4.1 Requirements under the NEL

The Commission's assessment of this rule change request must consider whether the proposed rule is likely to contribute to the achievement of the National Electricity Objective (NEO).

The NEO is:[41]

> "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."

The relevant aspects of the NEO to this rule change are the "efficient operation" of electricity services with respect to price and reliability. The factors discussed below expand and explain these aspects as they are relevant to this rule change request.

Consideration needs to be focussed on whether the rule change request encourages efficient operation of the prudential framework through more efficient utilisation of MP's capital, while maintaining the NEM prudential standard. The efficient utilisation of MP's capital may result in lower costs for MPs, which, in turn, may lead to reduced costs for consumers.

4.2 Assessment approach

The issues raised in the rule change request centre on the risks associated with a MP default and how the costs associated with managing these risks could be allocated to parties in order to best promote the NEO. These issues will be considered within the context of the prudential standard.

4.3 Factors for effective risk management

In considering the problem raised by the rule change request and any solution, the following factors may be considered by the AEMC:

- the extent to which risks are allocated appropriately to the parties that have the information, ability and incentives to best manage each risk in order to minimise the long-term costs to consumers;

41 As set out under section 7 of the National Electricity Law (NEL).

- the risk and impact of a MP defaulting, the time taken by AEMO to suspend the MP following the default event, while maintaining the NEM prudential standard of 2% probability of exceedance, following a default event;
- the trade-off between flexibility and regulatory certainty; and
- the impact of inefficient barriers to entry to the NEM.

These factors are discussed further below.

4.3.1 Appropriate allocation of risks

The Proponent argues that adopting its proposed rule has two impacts:

1. A reduction in the level of credit support provided, and thus the cost of credit support, by MPs – in its rule change request, the Proponent estimates its proposed rule to lower NEM-wide credit support by $12 million, resulting in annual cost savings of $200,000-$500,000; and
2. Maintains the prudential standard, and therefore maintains the risk of payment shortfalls to the NEM at the permissible (2%) probability level.

Consequently, the Proponent argues that its proposed rule may boost the allocative and productive efficiency[42] of the NEM, to the extent that the savings from providing a lower level of credit support is passed through to customers.[43] In the context of the prudential standard, an efficient outcome is one where the benefits provided by the credit support – principally, the reduced settlement risks to the NEM in the event of a MP's default - equal the costs (both explicit and implicit) incurred in providing that credit support.

Question 2 The impact of the proposed rule on market efficiency

(a) Is the proposed Rule likely to result in cost savings for MPs? Are the potential cost savings estimated by the Proponent ($200,000-$500,000 per annum across all Participants) consistent with stakeholders' expectations? How do these savings compare with the costs of implementing such changes?

(b) What impact would the proposed Rule have on the ability of AEMO to maintain the prudential standard in the NEM?

42 Productive efficiency means goods and services should be provided at the lowest possible costs to consumers. Allocative efficiency means that the price of goods and services should reflect the cost of providing them, and that only those products and services that consumers desire should be provided.

43 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 20. Available from: www.aemc.gov.au.

4.3.2 The risk of a shortfall - a prudential risk perspective

By allowing for offsetting between reallocation and trading amounts in the calculation of the PM, the proposed rule seeks to change the way that:

- prospective reallocations;
- generation offsets (for net positive trading amounts); and
- load offsets (for net negative trading amounts,

are treated during the reaction period. Therefore, in analysing the impact of the proposed rule from a prudential risk perspective, one needs to consider what would happen during the reaction period. As discussed earlier, the reaction period covers the time taken by AEMO to identify a default event against a MP, and suspend the MP.

An important factor in influencing the potential prudential risks arising from the proposed rule is the "firmness" of generation/load offsets, and reallocation offsets, during the reaction period. AEMO considers an offset to be "firm" if such an offset would continue for the duration of the reaction period.

Looking at a default event in the context of prospective reallocations, the Proponent raises the following four aspects of the NER:

- AEMO may deregister a reallocation request in the case of a default event in respect of either party to the reallocation.
- AEMO may deregister a reallocation request at the request of both parties to the reallocation.
- AEMO may review a MP's MCL if AEMO believes there is a prudential impact on any reallocation requests.
- The ex-ante timetable for reallocations requires reallocation requests to be lodged in advance to be considered for the MCL calculation.

In deciding whether to deregister a prospective reallocation request, AEMO considers the prudential impact of deregistration on the MPs involved. Importantly, AEMO is not compelled to deregister a reallocation request, even if both parties request it, if AEMO believes that the termination would increase the exposure of the NEM following a default event.

At any point during the reaction period, AEMO can deregister a reallocation, but neither party can terminate a reallocation unilaterally. Additionally, AEMO can undertake a MCL review of a MP if it believes there is a prudential impact in relation to any reallocation requests. Moreover, due to the nature of prospective reallocations, AEMO states it can be certain that prospective reallocations will cover at least the reaction period in case of a default event.

Given the above, the Proponent believes that there are adequate processes to determine the firmness of reallocations and to deregister reallocations that are not considered sufficiently firm in a timely manner. Therefore, the Proponent argues that its proposed rule is consistent with the 2% prudential standard, as its proposed rule would not increase the prudential risks in the NEM above that probability threshold.

Question 3 Appropriate allocation of risks - part 1

(a) Do stakeholders agree that adequate processes exist to determine the firmness of reallocations? If so, why? If not, why not?

(b) Do stakeholders agree that adequate processes exist to deregister those reallocations not considered sufficiently firm in a timely manner? If so, why? If not, why not?

The Proponent argues that the restriction on offsetting between reallocation and trading amounts is largely unintentional. However, one alternative explanation for this restriction could be related to the legal standing of the underlying contracts.

In the development of the 2012 Rule, concerns were raised about the potential unavailability of the underlying contractual arrangements, in the event of a default by a MP involved in the reallocation. The concerns related to whether AEMO could rely on the reallocation surviving one of the parties entering administration or liquidation.

AEMO has also raised concerns about the firmness of generation offsets during the reaction period, if the reason for the associated default event was the failure of a MP's largest generating facility.[44] To mitigate the potential prudential risks from such a failure, AEMO sought discretion, when calculating the PM of a generator, to limit the extent of its generation offsets to reflect the failure of this generator's largest generating facility.

Concerns about the firmness of generation and reallocation offsets may mean that the current inability to offset trading amounts against reallocation amounts, in the calculation of the PM, may be warranted and may be consistent with the prudential standard. Furthermore, this restriction may be warranted to the extent that removing the restriction would lead to a lower level of credit support being provided than is optimal to reflect the risks involved in participating in the NEM.

Question 4 Appropriate allocation of risks - part 2

Have prior concerns raised by stakeholders about the firmness of reallocation offsets and generation offsets during the reaction period been sufficiently addressed to warrant removal of the restriction on these offsets as proposed by AEMO? If not, do these concerns warrant continuation of the existing restriction on offsetting between trading and reallocation amounts?

4.3.3 Trade-off between flexibility and regulatory certainty

In order for markets to operate effectively, market rules must be clear and enforceable. The regulatory frameworks should be flexible, and provide firms with a clear, transparent, and consistent set of rules that allow them to independently develop business strategies/models to adjust to changes in the market.

44 AEMO, Submission to NEM Prudential Standard and Framework Draft Rule Determination, 9 July 2012. Available from: www.aemc.gov.au

In response to the AEMC's draft determination on the 2012 Rule, AEMO previously sought to change the treatment of offsets in the prudential margin. In its submission (referred to as the July 2012 submission[45]), AEMO sought to replace clause 3.3.8(e) with a clause that would allow for offsets between trading and reallocation amounts. This clause also provided AEMO with the discretion to "limit credit offsets where there was a reasonable probability that the offset might not be effective during the reaction period".[46]

There was broad support from stakeholders for the principle of modifying the rules to permit the offsetting of reallocation and trading amounts in the calculation of the PM. However, stakeholders reacted strongly to the 2012 submission citing concerns that AEMO's proposal may grant AEMO discretion that it does not have in other parts of the prudential framework, which could unnecessarily decrease the transparency of the prudential framework.

In particular, TRUEnergy noted that it did not support the proposal to grant AEMO discretion to reduce the assumed contribution of reallocation and trading amounts in the calculation of the prudential margin as it would increase uncertainty and costs for MPs.[47]

Partly reflecting these stakeholder concerns, the Commission determined not to make the rule as proposed by AEMO and made the following observations:

> "The Commission has determined not to implement the additional changes to the offsetting of credit amounts as proposed by AEMO in their response to the draft determination. In light of submissions received to the further consultation paper, the Commission considers that the issue may warrant more rigorous analysis and/or a different amendment than that proposed by AEMO."

The Commission also noted there was an opportunity to improve the offsetting of credit amounts in the PM, a view supported by all the submissions to the Commission's August 2012 consultation paper, despite the opposition offered to the specific drafting of clause 3.3.8(e) as proposed by AEMO.

In contrast to AEMO's July 2012 submission, this explicit discretion is not included in the proposed rule. Instead, the Proponent is seeking to entirely remove clause 3.3.8(e), rather than modify its wording, and make consequential changes to the Credit Limit Procedures to specify the prudential margin calculations. However, as noted in section 3.3, clause 3.3.8(d) provides AEMO with some discretion in relation to developing the methodology to determine the prudential settings to apply to MPs. In particular, this

45 AEMO, Submission to National Electricity Amendment (New Prudential Standard and Framework in the NEM) Rule 2012, Draft Determination, 9 July 2012. Available from:www.aemc.gov.au.

46 AEMO, Submission to National Electricity Amendment (New Prudential Standard and Framework in the NEM) Rule 2012, Draft Determination, 9 July 2012, p. 1. Available from:www.aemc.gov.au.

47 TRUEnergy, Submission to New Prudential Standard and Framework in the NEM, Second Consultation Paper, 2012. Available from: www.aemc.gov.au.

discretion includes the extent to which AEMO takes account of prospective reallocation amounts in the calculation of the PM.[48]

A relevant consideration for the Commission in relation to this rule change proposal is, if allowing offsetting between reallocation and trading amounts in the calculation of the PM can be demonstrated to promote the NEO, under which of the following two cases may regulatory certainty and transparency be more enhanced (and discretion on the part of AEMO reduced):

- Removing clause 3.3.8(e), as proposed by the Proponent.
- Remove clause 3.3.8(e) and also make clear that AEMO's methodology to determine prudential settings must provide for prospective reallocations to be offset against trading amounts.

Question 5 Trade-off between flexibility and regulatory certainty

(a) If the proposed rule were made, AEMO will retain some discretion in relation to the extent it takes account of prospective reallocations in the calculation of the PM (under clause 3.3.8(d)(6). In this context, have concerns raised in the context of the 2012 rule change proposal about the level of discretion provided to AEMO in relation to the calculation of the prudential margin been addressed?

(b) Would regulatory transparency be improved by specifying in the Rules that AEMO must allow for offsets of trading amounts and reallocation amounts in the prudential margin calculation?

(c) Are there other ways in which the offsetting between trading amounts and reallocation amounts can be made more transparent, in a manner consistent with the prudential standard?

4.3.4 Competition and barriers to entry

Inefficient costs imposed by a MP's entry to the NEM may deter potential MPs from entering. While these costs may be considered a barrier to entering the NEM, it may be appropriate for a MP to bear such costs if it leads to them making better decisions about whether to enter the NEM, which may result in lower costs for consumers in the long-term.

Furthermore, costs such as those incurred in providing credit support to AEMO, may be an accurate reflection of the risks posed by a new MP to AEMO and other MPs. Ultimately, the question is whether the costs of providing credit support are equal to the benefits provided by that credit support.

In its rule change request, the Proponent argues that, under the existing Rules – in particular, clause 3.3.8(e) – the cost of providing credit support is higher than the benefits. Therefore, the Proponent argues, the operation of clause 3.3.8(e) creates a barrier to entry. By removing clause 3.3.8(e), the Proponent estimates annual cost

48 Clause 3.3.8(d)(6).

savings, across all MPs, of $200,000-$500,000, whilst still maintaining the prudential quality of the NEM.

Furthermore, the Proponent argues, these costs are borne disproportionately by non-vertically integrated retailers and generators, as these MPs are required to provide more credit support than gentailers even when all three have the same economic exposure (see Figure 3.1). Therefore, the Proponent argues, were clause 3.3.8(e) to be removed, the main beneficiaries may be standalone retailers and generators. As these MPs are typically small and currently have limited market share, removing clause 3.3.8(e) may improve their competitive position and overall competition in the NEM.

Since the commencement of the prudential framework in 2013, there have been increasing numbers of small retailers entering the NEM. There are currently 57 retailers in the NEM, of which 15 have commenced operations since 2013. An additional two retailers are currently seeking registration through the Australian Energy Regulator.[49] Furthermore, the AER found that smaller retailers have gained market share against the three largest retailers, particularly in NSW and Victoria.[50]

The AEMC reported smaller retailer concerns that current prudential arrangements can act as a barrier to entry into the NEM in the 2015 Retail Competition Review:[51]

> "Smaller retailers noted that prudential arrangements and credit support required by the Australian Energy Market Operator (AEMO), generators, financial intermediaries, the ASX and electricity networks can tie up working capital and limit their ability to expand."

However, the Commission expressed the view that prudential arrangements and credit support are important to address the risk of short payment in the event of participant default and therefore considered "that these requirements are necessary to safeguard the integrity of the NEM."[52]

Figure 4.1 provides a guide to the nominal outstandings limit and prudential margin values that AEMO may determine as part of the assessment of a new MP's prudential settings.[53]

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49 AER, Public Register of Authorised Retailers and Authorisation Applications. Available from: http://www.aer.gov.au/retail-markets/authorisations.

50 AGL Energy, Origin Energy and EnergyAustralia are the three largest retailers in Australia and together supply over 70% of small electricity customers (AER, 2014 State of the Energy Market 2014, p. 124).

51 AEMC, 2015 Retail Competition Review, 30 June 2015, p. 25. Available from: www.aemc.gov.au.

52 AEMC, 2015 Retail Competition Review, 30 June 2015, p. 23. Available from: www.aemc.gov.au.

53 AEMO, Credit Limit Procedures, v 2.0, 1 August 2014, p. 29. Available from: www.aemc.gov.au.

Figure 4.1 Nominal OSL and PM values for a new MP

Market Participant type	Requirement	OSL	PM
New Market Generator or Small Generation Aggregator (SGA)	Auxiliary/commissioning load coverage	$2,000 per 1MW	$500 per 1MW
New Market Customer – planning to acquire customers	3 month growth estimates available	$8,000 minimum	$2,000 minimum

In the Hedging Review,[54] the Commission expressed a view that consistency in the treatment of generation and reallocation arrangements across the NEM could be improved by introducing a rule change specifying that AEMO must determine the prudential margin of a gentailer based on its load (ie, not allow generation offsets in the calculation). In the Hedging Review, the Commission noted stakeholder comments that the credit support calculations at the time provided an inbuilt MCL concession for gentailers and that by requiring AEMO to determine the prudential margin based on load would remove "the significant competitive advantage for vertically integrated retailers over independent retailers without generation assets."[55]

Question 6 Competition and barriers to entry

Would the proposed change to the treatment of offsetting trading amounts and reallocation amounts in the prudential margin improve competition in the NEM (by reducing barriers to entry/expansion for smaller MPs)? Would the costs imposed by the revised rules accurately reflect the risks and costs associated with stand-alone retail or generation Market Participants in the NEM?

4.3.5 Other issues: costs and benefits of the rule change

As set out in section 3, AEMO estimates savings of $12 million, (or $200,000 to $500,000 per year) as a result of the 1.3% reduction in MCL requirements across the NEM. AEMO contends that this overall reduction in the cost of participating in the NEM should result in lower electricity prices for end-use consumers, but that the actual "cost savings passed onto end-use customers will be determined by each MP."[56]

54 AEMC, Review into the role of hedging contracts in the existing NEM prudential framework, Final Report, 30 June 2010. Available from: www.aemc.gov.au.

55 AEMC, Review into the Role of Hedging Contracts in the Existing NEM Prudential Framework, 30 June 2010, p. 83. Available from: www.aemc.gov.au.

56 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 20. Available from: www.aemc.gov.au.

In the rule change request, AEMO has identified that there will be no impact of MP systems or processes are expected as a result of the proposed removal of clause 3.3.8(e).[57]

Question 7 Costs and benefits of the rule change

(a) Are there any additional costs or benefits to MPs associated with making AEMO's proposed rule change, beyond those identified by AEMO in section 3?

(b) Is the modelling approach used by AEMO to estimate the reduction in MCL requirements appropriate? If not, please identify improvements that could be applied the modelling approach.

(c) What would be the impact on consumers of an overall reduction credit support costs (as a result of the proposed rule change)?

57 AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 22. Available from: www.aemc.gov.au.

5 Lodging a Submission

The Commission invites written submissions on this rule change proposal.[58] Submissions are to be lodged online or by mail by 4 February 2016 in accordance with the following requirements.

Where practicable, submissions should be prepared in accordance with the Commission's Guidelines for making written submissions on rule change proposals.[59] The Commission publishes all submissions on its website subject to a claim of confidentiality.

All enquiries on this project should be addressed to Leah Ross on (02) 8296 7800.

5.1 Lodging a submission electronically

Electronic submissions must be lodged online via the Commission's website, www.aemc.gov.au, using the "lodge a submission" function and selecting the project reference code ERC0188. The submission must be on letterhead (if submitted on behalf of an organisation), signed and dated.

Upon receipt of the electronic submission, the Commission will issue a confirmation email. If this confirmation email is not received within 3 business days, it is the submitter's responsibility to ensure the submission has been delivered successfully.

5.2 Lodging a submission by mail or fax

The submission must be on letterhead (if submitted on behalf of an organisation), signed and dated. The submission should be sent by mail to:

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

The envelope must be clearly marked with the project reference code: ERC0188.

Alternatively, the submission may be sent by fax to (02) 8296 7899.

Except in circumstances where the submission has been received electronically, upon receipt of the hardcopy submission the Commission will issue a confirmation letter.

If this confirmation letter is not received within 3 business days, it is the submitter's responsibility to ensure successful delivery of the submission has occurred.

58 The Commission published a notice under [section 95 of the NEL to commence and assess this rule change request.

59 This guideline is available on the Commission's website.

Abbreviations

AEMC	Australian Energy Market Commission
Commission	See AEMC
AEMO	Australian Energy Market Operator
MCL	Maximum Credit Limit
MP	Market Participant
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
OS	Outstandings
OSL	Outstandings Limit
P(LGD)	Probability of Loss Given Default (see also POE)
POE	Probability of Exceeedance
PM	Prudential Margin
PS	Prudential Standard
RA	Reallocation arrangement
RRP	Regional Reference Price
Rules	See NER
TL	Trading Limit

A Key terms in the prudential framework

This appendix provides a brief summary of the key terms in the NEM prudential framework. For complete definitions of these terms please refer to the relevant clause of the Rules:

- *Acceptable credit criteria:* in order to meet the acceptable credit criteria, an entity must be a resident financial institution or government treasury with an acceptable credit rating (clause 3.3.3);
- *Acceptable credit rating:* a credit rating of A-1 from Standard & Poor's (Australia) Pty Ltd, or a rating of P-1 from Moodys Investor Service Pty Ltd (clause 3.3.4);
- *Credit support:* a guarantee or bank letter of credit from an approved Credit Support Provider that provides a valid and binding obligation to pay AEMO in accordance with the terms of the guarantee (ie, in the case of a MP's default) (clause 3.3.2) ;
- *Credit support amount:* an amount no less than the current maximum credit limit for that MP that may be drawn on by AEMO in the case of default or payment is not cleared in time to meet a settlement deadline (clause 3.3.5);
- *Default event*: there are 15 default events defined in the Rules which include where a MP fails to: pay money due to AEMO under the Rules by the required times, or fails to provide sufficient credit support, or where the credit support provider or MP has been placed into administration or receivership (clause 3.15.21);
- *Maximum credit limit:* the minimum amount of credit support provided to AEMO, it is the amount which results in a 2% probability that the MP's credit support will be exceeded by its outstandings at the end of the reaction period (calculated as the dollar amount determined by AEMO using the formula MCL = OSL + PM (clause 3.3.8(k));
- *Prudential margin*: covers the potential loss that may occur between a MP defaulting and their suspension from the NEM during the reaction period (clause 3.3.8(e));
- *Prudential standard:* is the value of the prudential probability of exceedance, expressed as a percentage and set at 2%, in this case it is the probability of a MP's maximum credit limit being exceeded by its outstandings at the end of the reaction period following the MP's default (clause 3.3.4A);
- *Outstandings:*the value of a Market Participant's current liabilities to AEMO (clause 3.3.9);
- *Outstandings Limit:* the maximum value that a Market Participant's outstandings can reach over the payment period (where the Market Participant has provided credit support equal to the value of the maximum credit limit (clause 3.1.1A));

- *Payment period:* 28 days, comprised of the number of days in a billing period (the weekly 7 day period from Saturday to Sunday), plus the number of days until payment is due for that billing period (clause 3.1.1A)[60]
- *Prudential settings:* is the maximum credit limit, outstandings limit and prudential margin, as determined by AEMO in accordance with clause 3.3.8 (clause 3.3.1A)
- *Reaction period:*the 7 day period from the day a MP's outstandings exceed its trading limit, to the day the MP is suspended from trading under clause 3.15.21(c) (clause 3.1.1A);
- *Reallocation transaction:* a transaction undertaken by two MPs where AEMO credits one MP with a positive trading amount in respect of a trading interval, in consideration of a matching negative trading amount debited to the other MP in respect of the same trading interval (clause 3.15.11(a));
- *Trading Limit:* the maximum value that outstandings can reach before AEMO issues a call notice ie, the amount of credit support posted by the MP, less the prudential margin (calculated as the dollar amount using the formula TL = CS - PM) (clause 3.3.10).

60 AEMO, Credit Limit Procedures, 1 August 2014, p.11. Available from: www.aemo.com.au.

B The default process in the NEM

As illustrated in Figure 2.4when a MP's outstandings exceeds its trading limit, AEMO may issue a call notice requiring the MP to provide additional security. The amount of additional security must be not less than the call amount and provided to AEMO before 11.00am (Sydney time) on the next business day by doing one of the following:

- agreeing with AEMO an increase in the MP's MCL by an amount not less than the call amount and providing additional credit support to AEMO (clause 3.3.13(a)(1));
- paying to AEMO in cleared funds a security deposit of an amount not less than the call amount (clause 3.3.13(a)(2));
- lodging a reallocation request, that is accepted by AEMO (clause 3.3.13(a)(3)) (reallocations are discussed in section 2.5); or
- providing AEMO with a combination of the above that totals no less than the call amount (clause 3.3.13(a)(4)).

If the MP fails to respond to the call notice, AEMO may issue a default notice under clause 3.15.21(b)(1) requiring the MP to remedy the default by 1.00pm (Sydney time). At this time, AEMO may also make a claim on the MP's existing credit support for the amount of the call notice.

If the MP fails to respond, or responds inadequately, to the default notice, AEMO may issue a suspension notice,[61] notifying the MP of the date and time from which it will be suspended from trading in the NEM.

From the time stipulated in the suspension notice, the MP is no longer eligible to trade or enter into any transaction in the NEM, until such time as the suspension is lifted and all MPs have been notified.[62]

Once a MP is suspended from the NEM, AEMO will:

1. in the case of the MP being a retailer, transfer the MP's customers to another retailer (Retailer of Last Resort (RoLR));[63]
2. draw on the MP's credit support to meet any liabilities accrued;[64] and
3. in the case of the MP being a retailer, spread any shortfall from the credit support across the participating generators in the NEM.

As discussed in Section 2.3, the 2% prudential standard is designed to prevent this final step occuring in 98 out of 100 occasions where a MP defaults.

While the reaction period is defined as the 7-day period from the time the MP's outstandings exceed its trading limit to when the MP is suspended from trading,[65] the

61 Clause. 3.15.21(c)).

62 Clause 3.15.21(g).

63 Under the National Energy Retail Law (section 40) a customer of a failed retailer becomes a customer of the Retailer of Last Resort on the relevant transfer date.

64 Clause 3.15.21(b)(2).

actual time taken to suspend a MP depends on the timing of the default event, and can be as short as 2.5 days (60 hours).

Should a MP default for some reason other than failure to meet a call notice, the process effectively starts from the issuance of a default notice in the described above. Examples of these defaults include failure to pay a settlement amount when due, declaration of inability to pay by the MP, or withdrawal of authorisation to continue business by a jurisdictional regulator.[66]

65 Clause 3.1.1A.

66 Clause 3.15.21.