

Australian Energy Market Commission

## **FINAL RULE DETERMINATION**

National Electricity Amendment (Application of  
Offsets in the Prudential Margin Calculation)  
Rule 2016

**Rule Proponent**  
AEMO

22 September 2016

**RULE  
CHANGE**

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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.

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## Summary

The Australian Energy Market Commission (AEMC or Commission) has made a more preferable Rule (final Rule) that removes the restriction on offsetting trading amounts and reallocation amounts in the calculation of a market participant's prudential margin under the National Electricity Rules (NER) in response to a rule change request from AEMO.

The effect of this change is that AEMO may offset between trading and reallocation amounts when determining a market participant's prudential margin. This has the potential to reduce the amount of credit support required from market participants while maintaining financial stability in the NEM.

### Rule change request

The purchase and sale of electricity in the National Electricity Market (NEM) occurs through a central trading platform, the spot market. The Australian Energy Market Operator (AEMO) acts as the principal in the settlement of transactions with market participants in the spot market. In the NEM, the settlement of transactions occurs up to five weeks after the transaction occurs, which results in large amounts outstanding and gives rise to the need for a carefully managed prudential framework.

The prudential framework for the NEM is a set of requirements established to minimise the risk of a shortfall (known as the prudential probability of exceedance) in the settlement process in the event of a default by a market participant.<sup>1</sup>The prudential framework includes the prudential settings and the prudential standard.

The prudential standard sets the value of the prudential probability of exceedance to be 2%. The prudential standard is used by AEMO to determine the prudential settings to apply to each market participant. The prudential settings refer to the three components that determine the credit support provided by a market participant to AEMO: the maximum credit limit (MCL), the outstanding limit (OSL), and the prudential margin. The MCL is the sum of the OSL and the prudential margin. For each market participant, the prudential settings are set at a level such that the amount of credit support provided by that market participant covers that participant's liabilities in 98 out of 100 instances of default. In the remaining 2% of cases, a market participant's default can result in a payment shortfall to those market participants who are net creditors in the NEM.

The minimum amount of credit support required is known as the Maximum Credit Limit (MCL), which is one of the prudential settings. The MCL is calculated as being the total of the outstanding limit (OSL) and the prudential margin, which are the other two components of the prudential settings. The OSL is AEMO's estimate of the maximum value that a market participant's liabilities (or 'outstandings') can reach over the payment period.

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<sup>1</sup> The prudential framework is set out in Rule 3.3 of the NER and is supported by AEMO's Credit Limit Procedures. The National Electricity Market Amendment (New Prudential Standard and Framework) Rule 2012 established the current framework, which was implemented by AEMO in November 2013.

The prudential margin acts as a "buffer" to cover the potential loss that may occur for consumed but not yet paid for electricity between a market participant defaulting and its suspension from the NEM. The prudential margin cannot be less than zero.

The prudential margin for each market participant is calculated as the sum of the market participant's trading amounts and reallocation amounts. Trading amounts are defined in the Rules as the positive or negative dollar amount resulting from consuming or generating electricity. Generally, the trading amount is negative for a retailer, and positive for generators. 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 (for a negative reallocation amount), the market participant.

A reallocation arrangement is a Rules-supported financial arrangement between two market participants, supported by an off-market trading relationship (such as a hedging contract) between the two market participants. A reallocation arrangement can avoid circular cash flows and minimise settlement risk by netting this off-market commitment against pool settlement. A reallocation agreement can also provide credit support relief to a market participant by lowering their MCL.

AEMO submitted a rule change request to the AEMC seeking to remove the current restriction on offsetting between trading amounts and reallocation amounts in the prudential margin calculation, and therefore impacts on the level of credit support provided by a market participant to AEMO.<sup>2</sup>

AEMO considers that the current restriction on offsetting between trading amounts and reallocation amounts in the prudential margin calculation raises the following issues:

- The impact on competition, as the restriction affects market participants using reallocations, but does not affect them equally; and
- The current Rules result in an inefficient use of (some) market participant's collateral.

### **Commission's analysis and conclusions**

Having regard to the issues raised in the rule change request, the Commission is satisfied that the final Rule will, or is likely to, contribute to the achievement of the National Electricity Objective (NEO) by:

- enhancing the efficient operation of the prudential framework, while maintaining the NEM prudential standard;
- supporting competition in the NEM, by potentially lowering the costs of providing credit support for market participants particularly for standalone retailers and generators;
- providing greater regulatory certainty for all market participants with regard to the prudential margin calculation.

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<sup>2</sup> The rule change request also seeks to make a minor consequential amendment to clause 3.3.8(d) of the NER to remove the reference to clause 3.3.8(e).

In addition, the Commission is satisfied that the final Rule will better contribute to the achievement of the NEO than the proposed Rule.

By removing restriction on offsetting between trading amounts and reallocation amounts in the prudential margin calculation, there is a risk that the prudential margin may be reduced to below zero. While this may be unlikely given the requirement that AEMO must determine the prudential margin to meet the prudential standard<sup>3</sup>, the Commission has determined to include a clause in the final Rule to stipulate the prudential margin cannot be a negative amount in order to eliminate any prudential risks associated with a negative prudential margin. Whilst AEMO cannot determine a prudential margin that is a negative amount under the final rule, AEMO will have the discretion to determine what non-negative amount the prudential margin should be in accordance with the credit limit procedures and in order to meet the prudential standard for the NEM.

### **Final Rule**

The final Rule has the following key features:

- removal of the prohibition in clause 3.3.8(e) of the NER on offsetting of trading and reallocation amounts in the prudential margin calculation with effect from 20 October 2017;
- introduction of a new clause that stipulates that the prudential margin cannot be a negative amount in order to eliminate any prudential risks associated with a prudential margin being less than zero;
- retains AEMO's discretion in relation developing the methodology to determine the prudential settings to apply to market participants, including the extent to which it takes account of prospective reallocation amounts in the calculation of the prudential margin; and
- imposes (through transitional rules) a requirement for AEMO to amend and publish the Credit Limit Procedures, reallocation procedures and the reallocation timetable (as required) to take into account the final Rule (by 1 July 2017).

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<sup>3</sup> Clause 3.3.8(j) of the NER. Under Clause 3.1.1A the prudential standard means the value of the prudential probability of exceedance, expressed as a percentage, and as specified under clause 3.3.4A, to be used by AEMO to determine the prudential settings to apply to Market Participants

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# 1 Background

On 28 May 2015, the Australian Energy Market Operator (AEMO) submitted a rule change request to the Australian Energy Market Commission (AEMC or Commission). The rule change request proposes to remove the restriction on offsetting of trading and reallocation amounts in the prudential margin calculation by removing clause 3.3.8(e)<sup>4</sup> from the National Electricity Rules (NER or Rules).

Under clause 3.3.8(e), when determining the prudential margin, AEMO must not take into account estimates of a market participant'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.

The proposed Rule would allow AEMO to offset a market participant's trading amounts and reallocation amounts when determining the prudential margin for that market participant.

This chapter sets out the following background information to the rule change request including providing a discussion on:

- the prudential framework in the National Electricity Market (NEM);
- the prudential standard;
- other prudential settings;
- overview of reallocation arrangements in the NEM; and
- the default process in the NEM.

## 1.1 Prudential framework in the NEM

The prudential framework for the NEM is a set of requirements established to minimise the risk of short payment to those who are net receivers in the NEM, in the event of a default by a market participant.<sup>5</sup>

The NEM is a gross pool, 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 market participants in the spot market. Settlement occurs up to five weeks after the liability accrues, which results in large amounts outstanding.

AEMO's obligation to settle payments due to market participants in relation to a billing period is limited to the extent of funds received from market participants in respect of

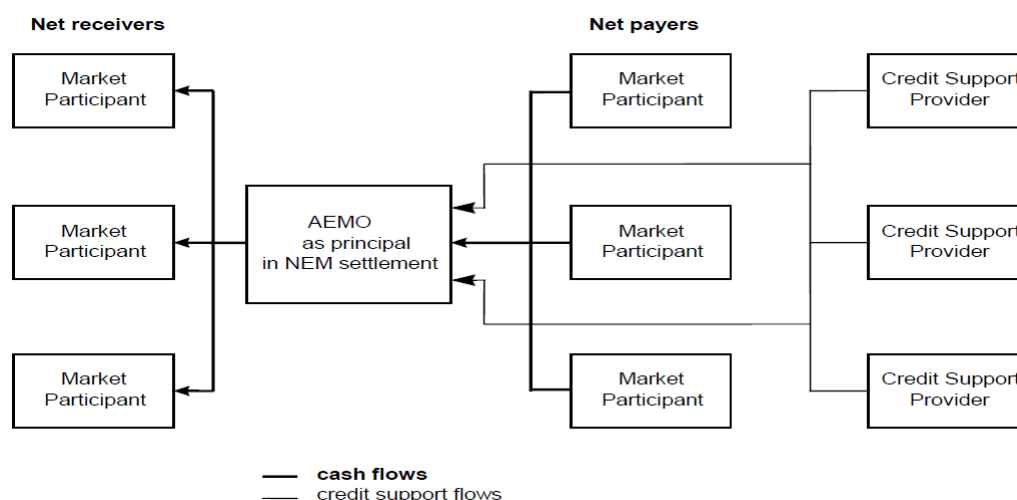
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<sup>4</sup> The rule change request also seeks to make a minor consequential amendment to clause 3.3.8(d) to remove the reference to clause 3.3.8(e).

<sup>5</sup> The prudential framework is set out in Rule 3.3 of the NER and is supported by AEMO's Credit Limit Procedures. The National Electricity Market Amendment (New prudential standard and Framework) Rule 2012 established the current framework, which was implemented by AEMO in November 2013.

that billing period (or provided under credit support arrangements). The relationship between AEMO and market participants is illustrated in Figure 1.1 which shows the two types of market participants: 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 market participants, but provide credit support to AEMO in respect of the obligations of the market participants. AEMO settles the transactions between net receivers and net payers, paying net receivers with the funds received from the net payers and, in the event of a default event, from credit support providers.

**Figure 1.1 Settlement of NEM transactions**



If a market participant does not satisfy the acceptable credit criteria<sup>6</sup> (and none of the current market participants satisfies those criteria), then that market participant 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. A credit support provider cannot be a market participant. The unconditional guarantee must be for an amount that is greater than or equal to the market participant's MCL. A market participant's MCL is the minimum amount of credit support it is required to provide to AEMO and is discussed in more detail in section 1.3.1. AEMO may call on that guarantee if payment by a market participant is not cleared in time to meet a settlement deadline.<sup>7</sup>

Any shortfall in AEMO's recovery from any market participant in relation to a billing period is shared proportionately by market participants (typically generators) who are due payments in that billing cycle, in accordance with the Rules.<sup>8</sup>

<sup>6</sup> Set out in clauses 3.3.3 and 3.3.4 of the NER.

<sup>7</sup> Clause 3.3.2, clause 3.3.5 and clause 3.15.21(b)(2) of the NER.

<sup>8</sup> Clauses 3.15.22 and 3.15.23 of the NER.

## 1.2 Prudential standard

The prudential standard is set at a prudential probability of exceedance (POE)<sup>9</sup> of 2%.<sup>10</sup> This standard implies that the credit support arrangements in the NEM is designed to prevent any shortfall of monies collected by AEMO in 98 out of 100 instances of a market participant defaulting. In the remaining 2% of cases, AEMO's inability to collect sufficient funds following that market participant's default may result in a payment shortfall to those market participants who are net creditors in the NEM (as discussed in section 1.2.1). Critically, the prudential standard does not reflect the size of the potential losses that could occur in the 2% of cases. These potential losses are left to the creditor market participants, and their insurers and financiers, to estimate and manage.

The prudential standard is used by AEMO to calculate the prudential settings for every market participant in the NEM. AEMO's approach to calculating each of these settings is explained in the Credit Limit Procedures (CLP), and a brief discussion is provided in the next sections. The objective of the CLP 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.

AEMO intends that the application of the CLP will meet the prudential standard on average, over time, with no systemic or persistent bias in the estimated MCL for any category of market participants. It is stated in AEMO's Procedures that given the nature of the estimate process used by AEMO, it can be expected that the prudential standard may not be met or may be exceeded from time to time.<sup>11</sup>

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 ensuring the prudential standard is met for the NEM.

## 1.3 Prudential settings in the NEM

The prudential settings for a market participant comprise the MCL, outstandings limit (OSL) and the prudential margin as determined by AEMO in accordance with clause 3.3.8 of the Rules.<sup>12</sup> These settings are explained in more detail below.<sup>13</sup>

### 1.3.1 Maximum Credit Limit (MCL)

A market participant'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% probability that, were that

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<sup>9</sup> Also referred to in AEMO's Procedures as the Probability of Loss Given Default [P(LGD)]. Clause 3.1.1A of the NER defines the prudential probability of exceedance as the probability of the Market Participant's maximum credit limit being exceeded by its outstandings at the end of the reaction period, following the Market Participant exceeding its outstandings limit on any day and failing to rectify this breach.

<sup>10</sup> Clause 3.3.4A of the NER.

<sup>11</sup> AEMO, Credit Limit Procedures, v2.0, 1 August 2014, clause 4.2, p. 10.

<sup>12</sup> These terms are defined in clause 3.1.1A of the NER.

<sup>13</sup> These are the requirements for determining the prudential settings under both the Rules and AEMO's CLP.

market participant to default, its credit support would be insufficient to fully meet the liabilities it owes to the spot market.

The MCL is calculated using the following formula:<sup>14</sup>

$$\text{MCL} = \text{OSL} + \text{PM}$$

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 MCL and prudential margin must be zero or positive (i.e., non-negative).

AEMO's methodology for calculating the MCL is set out in the CLP. The MCL is calculated by AEMO for each market participant and for each region that market participant has a market presence using the following inputs:<sup>15</sup>

- Background Calculations: region-specific parameters, including the regional reference price (RRP);
- Inputs into the calculation of the prudential settings: both regional parameters (such as the Regional Volatility Factors) and market participant-specific parameters like estimated loads in the region; and
- Market participant-specific prudential settings: based on the above inputs, AEMO calculates the OSL and therefore the MCL for each market participant.

In determining these calculations, clause 3.3.8(d) allows AEMO to consider any other relevant factors, having regard to the objective of the CLP.<sup>16</sup>

### **1.3.2 Outstandings limit (OSL)**

The OSL is AEMO's estimate of the maximum value that a market participant's liabilities (or 'outstandings') can reach over the payment period.<sup>17</sup> The purpose of the OSL is to 'cap' the total outstandings of the market participant, with breaches of this cap requiring the market participant to provide additional credit support.

The OSL is designed to provide that the NEM is not exposed to a prudential risk that is inconsistent with the prudential standard.

### **1.3.3 Prudential Margin (PM)**

The prudential margin is set at an amount that is expected to cover the liabilities accrued by the market participant from the time that a call notice is issued to that market participant, to the time that the market participant is suspended from the NEM.

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<sup>14</sup> Clause 3.3.8(k) of the NER.

<sup>15</sup> AEMO, Credit Support Procedures, v2.0, 1 August 2014, p. 9.

<sup>16</sup> AEMO's ability to have regard to such factors is subject to restriction in clause 3.3.8(e) of the NER

<sup>17</sup> Clause 3.1.1A of the NER.

For the purposes of calculating the prudential margin, this period is defined as a 7 day period (the reaction period).<sup>18</sup>

The prudential margin acts as a "buffer" to cover the potential loss that may occur between a market participant defaulting and its suspension from the NEM. The prudential margin cannot be less than zero.

The prudential margin for each market participant is calculated as the sum of the prudential margin for the market participant's trading amounts and reallocation amounts:

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

Where:

- $PM_{\text{trading amounts}}$  is a function of aggregate trading amounts; and
- $PM_{\text{reallocation amounts}}$  is a function of aggregate reallocation amounts.<sup>19</sup>

Trading amounts are defined in the Rules as the positive or negative dollar amount resulting from a transaction.<sup>20</sup> Generally, the trading amount is negative for a retailer, and positive for generators. 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 (for a negative reallocation amount) the market participants.

Reallocations are discussed further below.

#### **1.3.4 Relationship between the MCL, OSL and prudential margin**

The relationship between the MCL, OSL and prudential margin is shown in Figure 1.2, using the example of a hypothetical market participant during the 2014 calendar year.

In this example, during April 2014, high spot prices in the NEM, meant the market participant'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 prudential margin. 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 prudential margin, respectively.

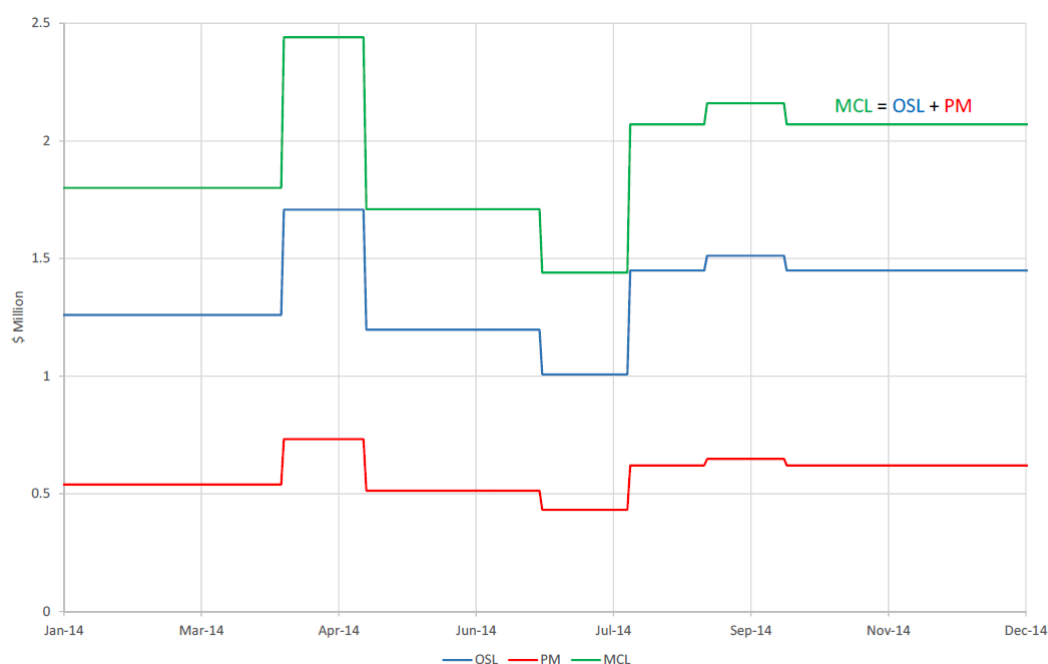
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<sup>18</sup> Clause 3.1.1A of the NER.

<sup>19</sup> AEMO, Credit Limit Procedures, v2.0, 1 August 2014, p. 16.

<sup>20</sup> See the definition of trading amount in Chapter 10 of the NER. The Rules define a transaction as either spot market transaction, reallocation transaction or any other transaction in the market or to which AEMO is a party.

**Figure 1.2 Relationship between the MCL, OSL and prudential margin**



The prudential settings are assessed and varied by AEMO regularly. Each market participant has access to its own online prudential dashboard which provides real-time information on its prudential settings. The information displayed on the dashboard provides market participants 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 market participant. For generators, the dashboard provides information about their accrued financial position with AEMO.<sup>21</sup>

### 1.3.5 Trading limit (TL)

The trading limit is the maximum amount that a market participant's outstandings are allowed to reach before AEMO issues a call notice under clause 3.3.11.

The trading limit is defined as:<sup>22</sup>

$$TL = CS - PM$$

Where CS is the credit support provided by the market participant.

The purpose of the trading limit is to minimise the risk that a market participant incurs liability to AEMO in excess of the amount of security AEMO holds for that market participant. The trading limit acts as a cap on the amount owing by a market participant to AEMO. Market participants are required to monitor their amount owing and to provide additional security to AEMO immediately if a breach of the trading limit occurs.

<sup>21</sup> AEMO, Prudential Dashboard Support Information, 1 December 2010.

<sup>22</sup> Clause 3.3.10 of the NER.

**Figure 1.3 The trading limit, outstandings and MCL**

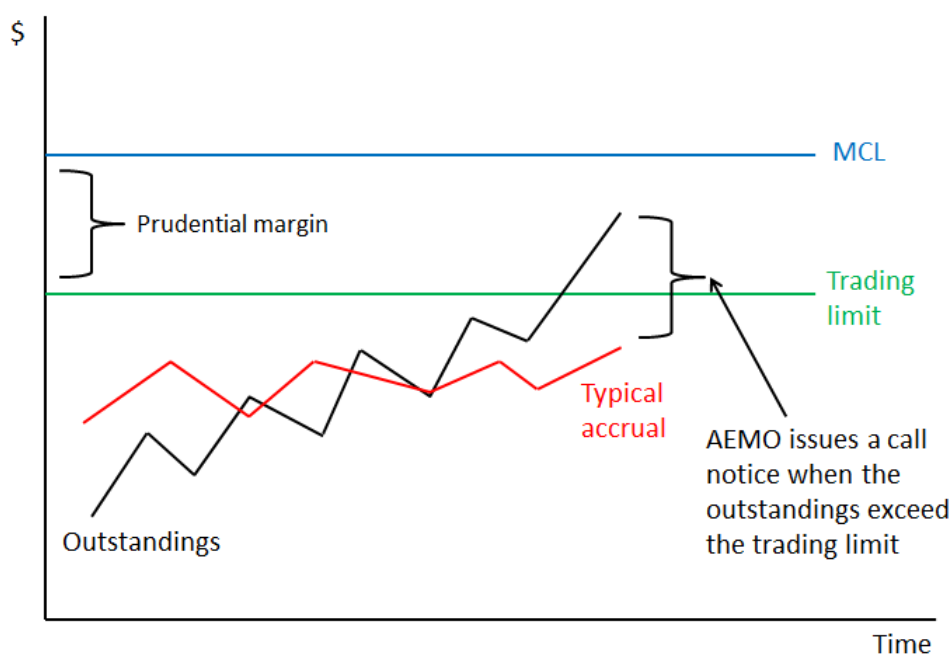


Figure 1.3 illustrates the relationship between the dollar amount of credit support (vertical axis), the MCL, trading limit, the typical accrual and the level of outstandings, for a hypothetical market participant. Typical accrual is an amount which AEMO determines would have been the outstandings of the market participant if spot prices, ancillary service prices and trading amounts for the market participant had been at average levels.<sup>23</sup>

In this example, the amount of credit support is set equal to MCL, which is a sufficient amount of credit support as long as the amount of outstandings is less than the trading limit, which is initially the case. In practice, it is typically the case that the amount of credit support provided by a market participant is equal to their MCL, provided their outstandings remain no higher than their trading limit.

The figure shows that, as time passes (horizontal axis), the outstandings gradually increases until it exceeds the trading limit. At this point, a call notice may be issued by AEMO under clause 3.3.11(a)(2), requiring the market participant to provide additional credit support.<sup>24</sup> The amount of additional credit support is the higher of outstandings less typical accrual, and outstandings less trading limit. This additional credit support, if provided by the market participant, is sufficient to raise the trading limit back above

<sup>23</sup> Clause 3.3.12 of the NER.

<sup>24</sup> AEMO has established a further, informal step in the daily monitoring process in addition to the formal procedure described in clause 3.3.11 prior to issuing a call notice. Under this additional step, AEMO advises NEM Participants at about 8.30am if their outstandings from the previous day exceeded their trading limit. This then provides those NEM Participants with the opportunity to pay a security deposit (or register a reallocation arrangement or provide a bank guarantee) equal to the difference by 10.30am, and thereby avoid the need for a call notice under cl. 3.3.11(a)(2), and/or an interim statement under cl. 3.3.11(a)(1), to be issued.

outstandings, and therefore satisfy the prudential standard for this hypothetical market participant.

## 1.4 Reallocation arrangements

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

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

The retailer's MCL is based on its pool liability, taking into account reallocation arrangements between the retailer and other market participants.

A reallocation arrangement<sup>25</sup> is a Rules-supported<sup>26</sup> financial arrangement between two market participants, supported by an off-market trading relationship (including, but not limited to, a hedging contract) between two market participants. A reallocation arrangement can serve up to two purposes:

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

Figure 1.4 and Figure 1.5 demonstrates how reallocation arrangements can be used to avoid circular and potentially volatile cash flows in the NEM and thereby minimise the associated settlement risks for AEMO and market participants. In this stylised example, a retailer and generator have entered into a reallocation arrangement with a strike price of \$40/MWh. The average weekly pool price is assumed to be \$450/MWh, with generation and load for that week assumed to be 16,800 MWh. Therefore, the AEMO pool settlement is \$7,560,000 ( $\$450 \times 16,800$ ).<sup>27</sup>

In Figure 1.4, the reallocation arrangement has not been 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 amount of \$6,888,000 (being the difference in settlement amounts to the generator under

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<sup>25</sup> 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.

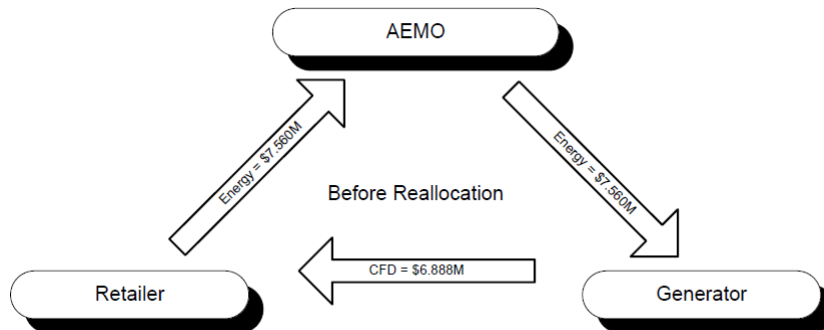
<sup>26</sup> Clause 3.15.11 of the NER.

<sup>27</sup> This example, and associated images, are taken from AEMO, Reallocation Procedure: Energy and Dollar Offset Reallocations, v. 2.1, 5 May 2011, pp. 11-13.



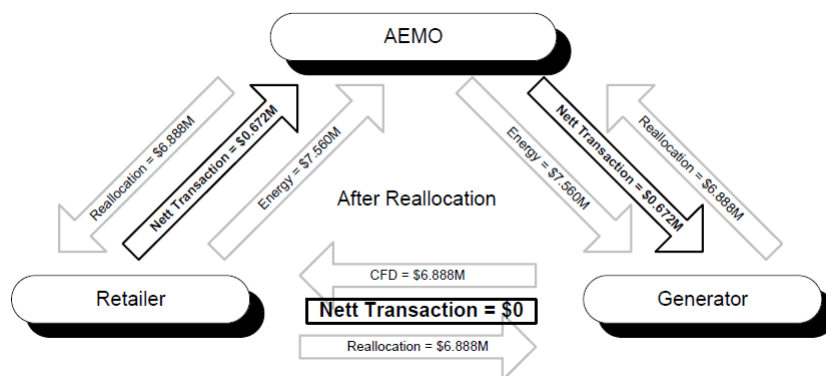
the pool price and the strike price, respectively:  $\$7,560,000 - (16,800 \times (\$40 - \$45)) = -\$6,888,000$ ).

**Figure 1.4 Circular cash flows in the NEM settlement: reallocation arrangement not registered**



In contrast, in Figure 1.5 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 1.5 Circular cash flows in the NEM settlement: reallocation arrangement registered**



In order to avoid these circular cash flows, a reallocation arrangement needs to be registered with AEMO. To begin the registration process for a reallocation arrangement, market participants submit a reallocation request to AEMO. A reallocation arrangement is jointly requested by two parties, usually a retailer and a generator. A reallocation request is an instruction lodged with AEMO to initiate a reallocation transaction, and according to clause 3.15.11(d) of the Rules 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 requires 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 market participants.<sup>28</sup>

Once registered, the reallocation arrangement can be used to reduce each of the two market participants’ settlements amounts with AEMO via a reallocation transaction. A reallocation transaction is defined in clause 3.15.11(a) of the Rules as follows:<sup>29</sup>

“A reallocation transaction is a transaction undertaken with the consent of two Market Participants and AEMO under which AEMO credits one Market Participant with a positive trading amount in respect of a trading interval, in consideration of a matching negative trading amount debited to the other Market Participant in respect of the same trading interval.”

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 reallocation timetable can be included in the determination of a market participant’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.<sup>30</sup> 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 reallocation arrangement to be deregistered in accordance with clause 3.15.11(f) of the Rules.

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.

Clause 3.15.11(b) of the Rules allows AEMO to specify the permitted types of reallocation transactions. It states that “[r]eallocation 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

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<sup>28</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 6.

<sup>29</sup> Chapter 10 of the NER defines a reallocation transaction as a transaction which occurs when the applicable trading interval specified in a reallocation request occurs and the reallocation request has been registered and not deregistered before the expiration of the trading interval.

<sup>30</sup> 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. At the time of this Review, AEMO’s procedures for offset arrangements did not require such confirmation.

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.

There is a third group of reallocations, Swaps and Options Offset, which cover three offsets: (i) Swap Offset; (ii) Cap Offset; and (iii) Floor Offset. These offsets are based on the type of hedge contract that underlies the reallocation transaction.<sup>31</sup> On 1 March 2016, ASIC granted AEMO an exemption from holding a Clearing and Settlement Facility Licence, permitting AEMO to operate these reallocations in accordance with the exemption conditions.<sup>32</sup> AEMO has commenced stakeholder consultation as a precursor to incorporating these offsets into its reallocation procedures.<sup>33</sup>

Continuing the example of a retailer-generator off-market commitment, an Energy Offset reallocation arrangement can be used to reduce the retailer's outstandings in the NEM (by crediting the retailer's account) to reflect the energy under the reallocation arrangement. 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 reallocation arrangement, outside the NEM.

While ex-post reallocations cannot be directly used to provide credit support relief, they can still impact a market participant's level of credit support. An ex-post reallocation can reduce a market participant's level of outstandings and therefore reduce the risk that its outstandings exceeds its trading limit, reducing, in turn, the chance of this market participant being issued a Call Notice. Ultimately, an ex-post reallocation can reduce the possibility of this market participant being suspended from the NEM, avoiding potential flow-on market disruption.

#### **1.4.1 Reallocation arrangements and the MCL**

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

1. By reducing its OSL; and
2. By reducing its prudential margin.

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

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<sup>31</sup> AEMO, Reallocation Procedure: Swap and Option Offset Reallocations, v. 2.1.

<sup>32</sup> For more details, see: <http://download.asic.gov.au/media/3551695/australian-energy-market-operator-limited-cs-facility-exemption-published-1-march-2016.pdf>. AEMO is currently undertaking various steps to implement these reallocations, including updating its reallocation procedure to reflect the ASIC announcement.

<sup>33</sup> For more details, see: <https://www.aemo.com.au/Stakeholder-Consultation/Consultations/2016-NEM-Reallocation-Procedures-Consultation>

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 market participant even when they have no reallocation arrangements.

As reallocations can be used to reduce circular, and potentially volatile, cash flows, the risk to the NEM from a market participant defaulting is reduced. To reflect this reduced risk, the Rules and AEMO's CLP allow for reallocations to reduce the amount of credit support via the OSL provided by market participants to AEMO.

In contrast, when calculating the prudential margin, the Rules, in particular, clause 3.3.8(e), do not permit the second and third form of offsetting.<sup>34</sup> While clause 3.3.8(e) applies to all market participants, AEMO is of the view that, in practice, it creates a potential inconsistency in the calculation of the prudential margin between different types of market participants. In particular, as discussed in AEMO's rule change request,<sup>35</sup> there is an inconsistency in the calculation of the prudential margin between, on the one hand, so-called 'gentailers' and, on the other, (standalone) generators and retailers.

## 1.5 The default process in the NEM

As illustrated in Figure 1.3 when a market participant's outstandings exceeds its trading limit, AEMO may issue a call notice requiring the market participant to provide additional security.

If the market participant fails to respond to the call notice in the time permitted under the Rules, AEMO may issue a default notice.

If the market participant fails to respond, or responds inadequately, to the Default Notice, AEMO may issue a Suspension Notice<sup>36</sup>, notifying the market participant of the date and time from which it will be suspended from trading in the NEM.

The default process is discussed in detail in the AEMC's consultation paper on this rule change.<sup>37</sup>

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<sup>34</sup> 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 prudential margin.

<sup>35</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 6.

<sup>36</sup> Clause 3.15.21 (c) of the NER.

<sup>37</sup> AEMC, National Electricity Amendment (Application of Offsets in the Prudential Margin Calculation) Rule 2015, Consultation Paper, 10 December 2015, Appendix B.

## **2 AEMO's rule change request**

This chapter sets out AEMO's rationale for the rule change request and the solution it has proposed. This chapter also sets out the Commission's rule making process to date.

### **2.1 The rule change request**

On 27 May 2015, AEMO made a request to the Commission to make a rule in relation to determining a market participant's prudential margin under the NER.

The rule change request sought 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 market participant to AEMO.

### **2.2 Rationale for rule change request**

In the rule change request, AEMO considered that removing clause 3.3.8 (e), which would remove the current restriction on offsetting between trading amounts and reallocation amounts in the calculation of the prudential margin, would reduce a market participant's credit support requirements and, as a result, would deliver the following benefits:

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

The rationale for this rule change informs AEMO's proposed solution, which is outlined in section 2.4.

### **2.3 Issues raised in the rule change request**

AEMO raised two primary issues associated with the current restriction, contained in clause 3.3.8(e) of the NER, on offsetting between trading amounts and allocation amounts in the calculation of the prudential margin:

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

These issues are summarised below.

### 2.3.1 Impact on competition

AEMO considered that removing clause 3.3.8(e) would remove the unequal treatment of market participants with equivalent financial exposure in the NEM, as well as the unequal treatment between the calculations of the OSL and the prudential margin, for each market participant. AEMO also considered that removing the current restriction would enhance competition through reducing barriers to entry, specifically for smaller market participants who currently face higher costs for obtaining credit support relative to larger, vertically integrated competitors.<sup>38</sup>

The disparity in treatment of reallocations in the prudential margin calculation by market participant type is shown in Figure 2.1, where:

- Panel A is a gentailer with a load of 120MWh and is generating 100MWh;
- Panel B is a reallocator with no trading amounts;<sup>39</sup>
- Panel C is standalone retailer with a load of 120MWh and a hedging agreement with a reallocator for 100MWh;
- Panel D is a standalone generator with a generation amount of 100MWh.

In this example, the gentailer has the same load amount as the standalone retailer (120MWh) and the same generation amount as the standalone generator (100MWh). However, as the gentailer can internally hedge (or offset) load and generation amounts, rather than externally hedge using a reallocation arrangement, the gentailer's prudential margin amount is reduced to 20MWh. In contrast under the existing arrangements, while both the retailer (Panel C) and generator (Panel D) have reallocation arrangements in place which have reduced their actual exposure to the NEM to 20MWh each, the prudential margin for both these participant types is calculated on the full amount of the 120MWh load (for the retailer) and 120MWh reallocation (for the generator).

On this basis, AEMO argued that clause 3.3.8(e) confers an advantage to gentailers in terms of the amount of prudential margin calculated, compared to standalone generators and retailers that have the same financial exposure to the NEM, but rely on reallocation arrangements, rather than internal hedging arrangements. AEMO considered standalone generators and retailers face higher costs of providing credit support, than their vertically integrated competitors, placing them at a competitive disadvantage.<sup>40</sup>

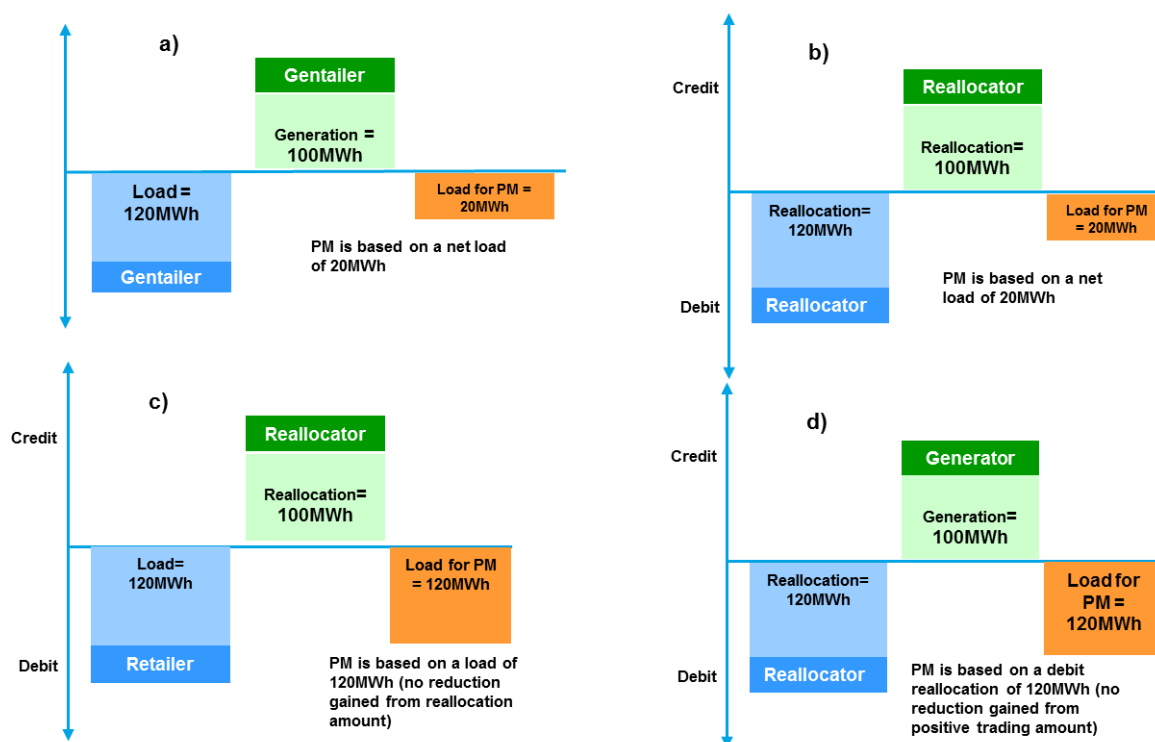
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<sup>38</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 19.

<sup>39</sup> Reallocators are neither a generator, nor a retailer. Reallocators are typically large financial institutions that enter hedging contracts with other market participants.

<sup>40</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 19

**Figure 2.1** Stylised example of prudential margin calculations under existing Rules<sup>41</sup>



Note: for the purpose of this figure, MWh and \$ reallocations are treated the same for the prudential margin calculation.

### 2.3.2 Inefficient use of market participant collateral

Under the existing Rules and CLP, trading and reallocation amounts can be offset against each other when calculating the OSL, but not when calculating the prudential margin. This means that the prudential margin for those market participants with both trading and reallocation amounts (such as the retailer and generator in Figure 1.1) is higher than would be the case if the trading and reallocation amounts could be offset against each other for both the OSL and the prudential margin (provided the prudential margin remained non-negative)

AEMO, in its rule change request and in its submission to the consultation paper, argued that adopting the proposed Rule would not result in a breach of the prudential standard.<sup>42</sup> As a consequence, AEMO argued that the current Rules lead to an allocatively inefficient outcome. AEMO note that “[p]roviding a reduction in credit support requirements without reducing the standard of prudential cover to the NEM, improves the efficiency of the prudential framework (and hence, the operation of the NEM)”<sup>43</sup>

<sup>41</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 10.

<sup>42</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 2 & 17; and AEMO, Consultation Paper submission, 17 February 2016, p. 1.

<sup>43</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 20.

In the rule change request, AEMO provided modelling that estimated the current level of credit support across all market participants in the NEM is around \$12 million (or 1.3%) higher than it would be under the proposed Rule.<sup>44</sup> In its submission to the consultation paper, AEMO revised the estimate to a 6.3% reduction, or approximately \$60 million, across all market participants in the NEM (based on summer 2014 data).

AEMO considered that the proposed rule would reduce the amount of credit support required by market participants without breaching the prudential standard. As such, AEMO considered the proposed Rule would improve the efficiency of the prudential framework and the operation of the NEM.

## 2.4 Solution proposed in the rule change request

AEMO sought to resolve the issues discussed above by proposing a rule to remove clause 3.3.8(e) from the NER. AEMO considered that this would reduce market participant's credit support requirements and, as a result, would deliver the following benefits:

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

Figure 2.2 shows AEMO's view of the effect of the proposed Rule on the four market participant types presented in Figure 2.1, using the same load and generation amounts as in Figure 2.1. In this example, it can be seen that the proposed Rule has no impact on the prudential margin calculation of either the gentailer (Panel A), or the reallocator (Panel B). However, the proposed Rule may reduce the prudential margin to 20MWh each for both the standalone retailer (Panel C) and the standalone generator (Panel D).

Under the existing Rules (clause 3.3.8), AEMO has some discretion in relation to developing the methodology to determine the prudential settings to apply to market participants.

NER clause 3.3.8(d) provides AEMO with some discretion in relation to developing the methodology to determine the prudential settings to apply to market participants. In particular, this discretion includes the extent to which AEMO takes account of prospective reallocation amounts in the calculation of the prudential margin. Clause 3.3.8(d) states:

“subject to paragraph (e) [which was proposed to be removed under the proposed Rule], in developing the methodology to be used by AEMO to

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<sup>44</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 16.



determine the prudential settings to apply to Market Participants, AEMO must take into consideration the following factors:

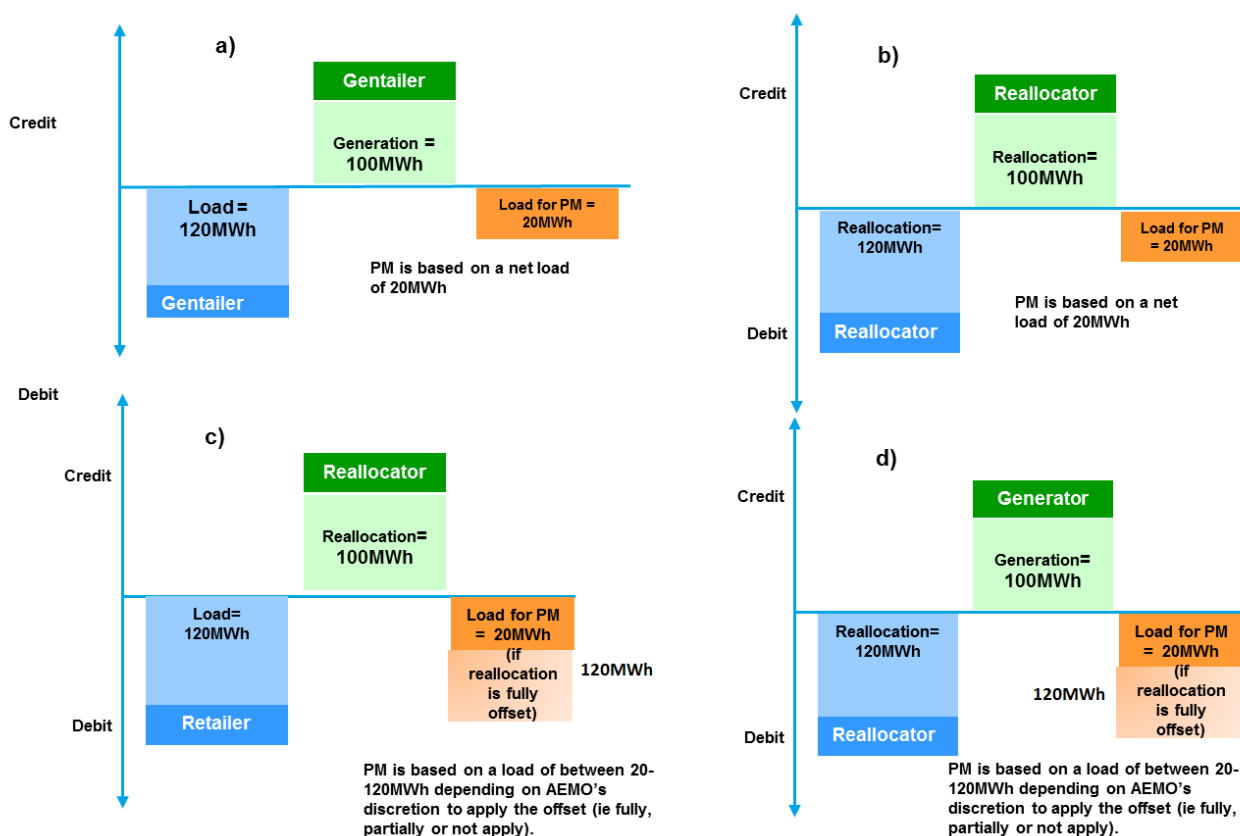
[....]

(6) any prospective reallocations for the period being assessed.

[....]”

Chapter 6 discusses the discretion provided to AEMO in clause 3.3.8 in more detail.

**Figure 2.2** Stylised example of prudential margin calculations under the proposed Rule<sup>45</sup>



Note: for the purpose of this figure, MWh and \$ reallocations are treated the same for the prudential margin calculation.

## 2.5 The rule making process

### 2.5.1 Consultation paper

On 10 December 2015, the Commission published a notice advising of its intention to commence the rule making process in respect of the rule change request.<sup>46</sup>

A consultation paper prepared by AEMC staff identifying specific issues and questions for consultation was also published with the notice. Submissions closed on 11 February 2016.

<sup>45</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 13.

<sup>46</sup> This notice was published under section 95 of the National Electricity Law (NEL).

The Commission received five submissions on the rule change request as part of the first round of consultation: ERM Power; GDF Suez Australian Energy (GDFSAE, now ENGIE ); Australian Energy Council (AEC); Origin Energy (Origin); and AEMO.

The submissions are available on the AEMC website.<sup>47</sup> The issues raised in submissions, and the Commission's response to each issue, are summarised in Appendix A.1.

The Commission extended the period of time to make the draft determination by 11 weeks, from 14 April 2016 to 30 June 2016 in order to fully consider the new information provided to it by AEMO in its submission to the consultation paper.

## **2.5.2 Publication of draft rule determination**

On 30 June 2016, the Commission published a notice under section 99 of the NEL and a draft Rule determination in relation to the rule change request (Draft Determination). The Draft Determination included a draft more preferable Rule (draft Rule). The draft Rule:

- removed the prohibition in clause 3.3.8(e) of the NER on offsetting of trading and reallocation amounts in the prudential margin calculation with effect from 1 December 2017;
- introduced a new clause that stipulated that the prudential margin cannot be a negative amount in order to eliminate any prudential risks associated with the prudential margin being less than zero;
- retained AEMO's discretion in relation to developing the methodology to determine the prudential settings to apply to market participants, including the extent to which it takes account of prospective reallocation amounts in the calculation of the prudential margin; and
- imposed (through transitional rules) a requirement for AEMO to amend and publish the credit limit procedures and reallocation procedures to take into account the draft Rule (by 1 July 2017).

Submissions to the Draft Determination closed on 11 August 2016. The Commission received three submissions on the Draft Determination: ERM Power, Australian Energy Council and AEMO. The submissions are available on the AEMC website.<sup>48</sup> A summary of the issues raised in the submissions, and the Commission's response to each issue, is contained in Appendix A.2.

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47 [www.aemc.gov.au](http://www.aemc.gov.au)

48 [www.aemc.gov.au](http://www.aemc.gov.au)

### 3 Final rule determination

The Commission's final rule determination is to make a more preferable Rule (final Rule). The final Rule:

- removes existing NER clause 3.3.8(e), which restricts the offsetting between trading and reallocation amounts in the prudential margin calculation with effect from 20 October 2017;
- introduces a requirement that the prudential margin for a market participant must not be a negative amount;
- imposes (through transitional rules that commence on 29 September 2016), a requirement for AEMO to amend and publish credit limit procedures, reallocation procedures and reallocation timetable, as required, to take into account the final rule (by 1 July 2017).

The *National Electricity Amendment (Application of Offsets in the Prudential Margin Calculation) Rule 2016 No 8* (Rule as Made) is published with this final Rule determination.

From 1 July 2016, the NER<sup>49</sup>, as amended from time to time, apply in the Northern Territory, subject to derogations set out in Regulations made under the Northern Territory legislation adopting the NEL.<sup>50</sup> Under those Regulations, only certain parts of the NER have been adopted by the Northern Territory. As the Rule as Made relates to part of the NER that currently do not apply in the Northern Territory, the Commission is not required to assess the rule against additional elements required by Northern Territory legislation.<sup>51</sup>

This chapter outlines:

- the Commission's rule making test for changes to the NER;
- the Commission's assessment framework for considering the rule change request; and
- the Commission's reasons for making the final Rule.

Further information on the legal requirements for making this Rule determination is set out in Appendix B.

#### 3.1 Rule making test

Under the NEL the Commission may only make a rule if it is satisfied that the rule will, or is likely to, contribute to the achievement of the NEO.<sup>52</sup>

The NEO is:

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<sup>49</sup> See [www.aemc.gov.au](http://www.aemc.gov.au) for details about parts of the NER adopted by the Northern Territory.

<sup>50</sup> National Electricity (Northern Territory) (National Uniform Legislation) (Modifications) Regulations.

<sup>51</sup> National Electricity (Northern Territory) (National Uniform Legislation) Act 2015.

<sup>52</sup> See section 88(1) of the NEL.

“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.<sup>53</sup>”

The Commission can make a rule that is different (including materially different) from the proposed rule if it is satisfied that, having regard to the issues raised by the proposed rule, the more preferable rule will or is likely to better contribute to the achievement of the NEO.<sup>54</sup>

For this rule change request, the Commission considers that the relevant aspects of the NEO are the efficient investment in, and efficient operation of electricity services for the long term interests of consumers.

### **3.2 Assessment framework**

In assessing the rule change request against the NEO the Commission considered the risks associated with a market participant default and how the costs associated with managing these risks could be allocated to parties in order to best promote the NEO. In assessing the rule change request, the Commission considered the following factors:

- Effective risk management:
  - 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;
  - the risk and impact of a market participant defaulting, the time taken by AEMO to suspend the market participant following the default event, while maintaining the NEM prudential standard of 2% probability of exceedance, following a default event;
- Impact on competition: the impact of inefficient barriers to entry to the NEM;
- Regulatory certainty: the trade-off between flexibility and regulatory certainty; and
- Costs and benefits: the costs and benefits associated with implementation.

#### **3.2.1 Effective risk management**

In its assessment of the proposed Rule, the Commission considered whether removing the restriction on offsetting between trading and reallocation amounts improves the efficiency of the NEM. In the context of this rule change, an efficient outcome is one where the benefit provided by the credit support, that is the reduced settlement risk to

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<sup>53</sup> See section 7 of the NEL.

<sup>54</sup> See section 91A of the NEL

the NEM, equals the costs (explicit and implicit) incurred in providing that credit support. In terms of effective risk management, the Commission considered:

- **the prudential risk (the risk of a shortfall in the case of a default event):** the risk and impact of a market participant defaulting, the time taken by AEMO to suspend the market participant following the default event, while maintaining the NEM prudential standard of 2% probability of exceedance, following a default event; and
- **appropriate allocation of risks:** 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. Included in this analysis is the firmness of reallocation, generation and load offsets during the reaction period and AEMO's processes for managing any prudential risks arising from "non-firm" offsets.

### 3.2.2 Impact on competition

Costs associated with market entry may deter potential market participants from entering the NEM. However, while costs associated with providing credit support may be considered a barrier to entry, it may be appropriate for a market participant to bear such costs if it leads them to making better decisions about whether to enter the NEM, which may ultimately 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 market participant to other market participants who are net receivers in the NEM settlement process.

The Commission considered the impact of the costs of providing credit support as a barrier to entry. The Commission also considered whether these costs are borne disproportionately by non-vertically integrated retailers and generators, as these market participants are required to provide more credit support than gentailers, despite all three having the same economic exposure (see Figure 2.1).

### 3.2.3 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 market participants 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.

In 2012, AEMO sought to change the treatment of offsets in the prudential margin calculation.<sup>55</sup> While there was broad support from stakeholders for the principle of modifying the Rules, there were significant concerns that the proposal could grant AEMO discretion that it did not have in other parts of the prudential framework,

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<sup>55</sup> In 2012, AEMO made a submission to amend clause 3.3.8(e) in response to the AEMC's draft determination on the draft determination on the National Electricity Amendment (New prudential standard and Framework in the NEM) Rule 2012 which established the current prudential framework (for further detail see AEMC, National Electricity Amendment (Application of Offsets in the Prudential Margin Calculation) Rule 2015, Consultation Paper, 10 December 2015, pp. 2-3).

thereby unnecessarily decreasing transparency and regulatory certainty for market participants.

Consequently, in considering the proposed rule's contribution to the achievement of the NEO, the Commission considered the trade-off between providing AEMO with sufficient flexibility to respond to changes in the market participants' reallocation and trading amounts in order to minimise the risk of shortfall in the NEM (i.e., maintain the prudential standard), relative to the uncertainty for market participants about the extent to which offsets may be applied in the prudential margin calculation.

### **3.2.4 Costs and benefits of implementation**

In its rule change proposal, AEMO provided NEM-wide estimates of the reduction in MCL (\$12 million) and a reduction in the costs of providing credit support (\$200,000-\$500,000 per annum). These estimates were revised in AEMO's submission to the AEMC's consultation paper to a reduction in MCL of \$62 million and a reduction in costs of providing credit support of \$0.92-\$2.4 million per annum. The Commission also considered the advice of Promontory Australasia on the effectiveness and appropriateness of these models for estimating the financial and prudential risk impacts of the proposed Rule.

In the submission to the consultation paper, AEMO also noted that it may be required to make significant operational and/or procedural changes in order to ensure the firmness of reallocation and generation offsets and minimise the prudential risk associated with implementing the proposal Rule. Consequently, the Commission considered the potential costs of these changes, along with any additional prudential risks associated with the proposed Rule, against the financial benefits estimated by AEMO (and validated by Promontory Australasia).

### **3.3 Summary of reasons**

The final Rule made by the Commission is attached to and published with this draft determination. The key features of the final Rule are:

- the prohibition on offsetting of trading and reallocation amounts in the prudential margin calculation, under clause 3.3.8(e) of the NER, will be removed with effect from 20 October 2017;
- a prohibition on a market participant's prudential margin being a negative amount will be introduced in clause 3.3.8, with effect from 20 October 2017;
- AEMO will retain discretion in relation to developing the methodology to determine the prudential settings to apply to market participants, including the extent to which it takes account of prospective reallocation amounts in the calculation of the prudential margin; and
- transitional rules requiring AEMO to amend and publish the Credit Limit Procedures, reallocation procedures and the reallocation timetable (as required) to take into account the final Rule (by 1 July 2017).

Having regard to the issues raised in the rule change request, the Commission is satisfied that the final Rule, which is a more preferable rule will, or is likely to, better contribute to the achievement of the NEO by:

- enhancing the efficient operation of the prudential framework, whilst maintaining the NEM prudential standard;
- supporting competition in the NEM, by potentially lowering the costs of providing credit support for market participants particularly for standalone retailers and generators; and
- providing greater regulatory certainty for all market participants with regard to the prudential margin calculation.

By removing existing clause 3.3.8(e) of the NER, there is a risk that the prudential margin may be reduced to below zero. While this may be unlikely, given the requirement that AEMO must determine the prudential margin to meet the prudential standard,<sup>56</sup> the Commission has determined to include a clause in the final Rule (which was not provided for in the proposed Rule) to stipulate the prudential margin cannot be a negative amount in order to eliminate any prudential risks associated with a negative prudential margin. Whilst AEMO cannot determine a prudential margin that is a negative amount under the final Rule, AEMO will have the discretion to determine what non-negative amount the prudential margin should be in accordance with the credit limit procedures and in order to meet the prudential standard.<sup>57</sup> Therefore, the Commission is satisfied that the final Rule will better contribute to the achievement of the NEO than the proposed Rule.

Further details of the final Rule are provided in Chapters 4 to 7.

### **3.4 Strategic priority**

This rule change request relates to the AEMC's strategic priority on markets and networks: encouraging efficient investment and flexibility. By removing the restriction on offsetting trading and reallocation amounts in the prudential margin calculation, the final Rule is expected to reduce the costs of providing credit support for market participants. This in turn is expected to lower barriers to entry, improve competition in the NEM and free-up market participant's capital so that it may be used to invest in other areas of their business.

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<sup>56</sup> Clause 3.3.8(j) of the NER. Under Clause 3.1.1A the prudential standard means the value of the prudential probability of exceedance, expressed as a percentage, and as specified under clause 3.3.4A, to be used by AEMO to determine the prudential settings to apply to Market Participants

<sup>57</sup> For example, AEMO may determine a prudential margin that is zero or a positive amount.

## 4 Effective risk management

This chapter discusses the risks associated with a market participant default and how the costs associated with managing these risks are allocated. In particular, the Commission has considered:

- the prudential risk (the risk of a shortfall in the case of a default event); and
- the appropriate allocation of risks, including the firmness of reallocation amounts and trading amounts and AEMO's processes for managing those risks.

### 4.1 AEMO's view

#### 4.1.1 The prudential risk

AEMO argued that removing the restriction on allowing offsets between trading and reallocation amounts in the prudential margin has two impacts:

1. A reduction in the level of credit support provided, and thus the cost of credit support, by market participants. The modelling provided by AEMO estimates the proposed rule would have lowered NEM-wide credit support by \$62 million in 2014 (leading to an estimated cost saving of \$0.92-\$2.46 million per annum);<sup>58</sup> and
2. Maintains the prudential standard, and therefore maintains the risk of payment shortfalls to the NEM at the 2% probability of exceedance.<sup>59</sup>

AEMO, in its rule change proposal and submission to the AEMC's consultation paper, provided modelling to demonstrate that the reduction in credit support calculated for the proposed rule would not significantly increase the likelihood of exceedance and that the prudential standard would continue to be met for all regions.<sup>60</sup> This modelling is discussed further in section 4.3.1. A detailed discussion of the estimated credit support savings can be found in Chapter 7.

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<sup>58</sup> The modelling was completed by AEMO and validated by Promontory. See Promontory Australasia, *Offsets in the Prudential Margin Economic Analysis*, report prepared for the AEMC, 3 June 2016, p. 21 & 29.

<sup>59</sup> AEMO, *Electricity Rule Change Proposal, Offsets in the Prudential Margin*, 28 May 2015, p. 2 & AEMO, *Submission to Consultation Paper*, 17 February 2016, p. 1.

<sup>60</sup> AEMO, *Electricity Rule Change Proposal, Offsets in the Prudential Margin*, 28 May 2015, p. 16 & AEMO, *Submission to Consultation Paper*, 17 February 2016, p. 1.



**Table 4.1 AEMO's prudential standard analysis<sup>61</sup>**

NEM region	Modelling provided in AEMO's submission (May 2015)		Revised modelling provided in AEMO's submission (February 2016)	
	Current Rules	Proposed Rule	Current Rules	Proposed Rule
NSW	1.8%	1.8%	1.7%	1.8%
QLD	1.8%	1.8%	1.9%	1.9%
SA	1.8%	1.8%	1.8%	1.9%
TAS	1.7%	1.7%	2.2%	2.3%
VIC	1.8%	1.8%	1.7%	1.8%

AEMO argued that the results in Table 4.1 (with the exception of Tasmania) imply that if the proposed Rule had been in place since the commencement of the NEM,<sup>62</sup> there would have been no material increase in prudential risk attributable to the proposed Rule, with the proposed Rule remaining consistent with the prudential standard.<sup>63</sup>

AEMO further argued that an increase in the actual probability of exceedance can be managed through adjustments to the regional volatility factors. These adjustments are used to calculate the regional MCL required in order to meet the prudential standard.<sup>64</sup>

#### **4.1.2 Appropriate allocation of risks**

In the rule change proposal, AEMO outlined its approach to managing the prudential risks associated with allowing offsetting between trading amounts and reallocation amounts in the prudential margin calculation. In particular, AEMO's rule change proposal outlined its approach to managing the firmness of reallocation amounts and trading amounts during the reaction period.<sup>65</sup>

##### **Reallocation offsets**

In relation to reallocation offsets during the reaction period, AEMO considered there are adequate processes in place to determine the firmness of reallocations and to act

<sup>61</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 17 & Promontory Australasia, Offsets in the Prudential Margin Economic Analysis, report prepared for the AEMC, 3 June 2016, p. 24.

<sup>62</sup> AEMO's rule change proposal indicates the model is based on data from the implementation of the new prudential framework in 2012. However the model itself draws on life-of-NEM data (see Promontory Australasia, Offsets in the Prudential Margin Economic Analysis, report prepared for the AEMC, 3 June 2016, pp. 22-26).

<sup>63</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 17.

<sup>64</sup> AEMO, Submission to Consultation Paper, 17 February 2016, pp. 1-2.

<sup>65</sup> See section 1.3.3, the reaction period is the time between AEMO issuing a call notice and suspension of a market participant from the NEM.

quickly to deregister those reallocations that are not sufficiently firm.<sup>66</sup> In particular, AEMO noted that it has the following options available to it:

- 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; and
- AEMO may review the market participant's MCL if AEMO believes there is a prudential impact arising from any reallocation requests (ad-hoc MCL review).

In addition, neither party can unilaterally deregister a reallocation request and, even if both parties request the reallocation be deregistered, AEMO is not compelled to do so if this could result in a breach of the prudential standard.

However, in AEMO's submission to the AEMC's consultation paper<sup>67</sup> it noted that current processes may be insufficient to ensure the firmness of reallocations. AEMO identified four options to mitigate the risk of including reallocations in the prudential margin that cease to be firm during the reaction period, and therefore minimise the risk of a potential breach of the prudential standard under the proposed Rule. One option is to not make a Rule; the other three options are associated with making the proposed Rule. The options are:

1. **Option 1: Do not make the proposed Rule:** the current Rules would remain as they are, (i.e., no offsetting between trading amounts and reallocation amounts would be permitted), with no change to either the existing procedures (i.e., CLP and reallocation procedures) or existing processes associated with implementing MCL increases remaining in place.
2. **Option 2: Implement full offsets, and ensure MCL increases are effective after one business day:** in the event that a reallocation ceases (either by expiring or being deregistered) AEMO could require the market participant with the (now ceased) credit reallocation amount to provide additional credit support within 24 hours (under clause 3.3.6(b)).
3. **Option 3: implement offsetting and extend the ex-ante reallocation timetable (AEMO's preferred option):** AEMO could extend the ex-ante reallocation timetable from seven to 14 business days, requiring market participants to lodge reallocation requests 14 days ahead of the trading interval to which the reallocation applies (this option would require amendments to the reallocation procedures).
4. **Option 4: Partial offsets:** AEMO would allow partial offsetting between reallocation and trading amounts in the prudential margin calculation for a market participant (this option would require amendments to the CLP).

Options 2 to 4 are discussed further in section 4.3.2.

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<sup>66</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, pp. 20-21.

<sup>67</sup> AEMO, Submission to Consultation Paper, 17 February 2016, pp. 2-5.

## Generation offsets

In the rule change proposal, AEMO noted it is reasonable to assume that a generator or gentailer would continue to operate its generation facilities during the reaction period. AEMO therefore considers generation amounts to be firm and:

“allowing offsetting between trading amounts and reallocation amounts in the prudential margin would not increase the prudential risks in the NEM under most reasonable scenarios.”<sup>68</sup>

However, AEMO noted that the reason for a default event could be the loss of a generating unit, which means the reduced generation output during the reaction period could represent a prudential risk when offsetting load with generation, as generation credits would be reduced and additional credit support would therefore be required.<sup>69</sup>

## 4.2 Stakeholder views

### 4.2.1 First round of consultation

Stakeholder submissions to the AEMC’s consultation paper expressed support for the proposed Rule and the view that AEMO’s processes are sufficient to minimise any prudential risks to the NEM associated with the proposed Rule.<sup>70</sup> In particular, CS Energy noted that it is satisfied that adequate processes exist to determine the firmness of offsets from credit reallocations or electricity generation and that AEMO has adequate powers to deregister a reallocation request and reject reallocation termination requests.<sup>71</sup>

The AEC submission noted that it is sensible that AEMO take account of offsetting arrangements in the NEM (vertical integration or electricity derivatives with reallocations) in determining whether a participant must provide collateral to protect creditors from the risk of a participant default.

### 4.2.2 Second round of consultation

Two submissions to the Draft Determination commented on the options provided by AEMO to change their systems in order to support changes proposed under the draft Rule.

ERM Power noted that these options would be subject to further consultation under a relevant procedure amendment. However, the submission indicated a preference for option 2, which would mean market participants would have to provide credit support within 24 hours of a MCL review. This option, according to ERM Power's submission, has the advantage of alleviating the identified risks associated with the rule change

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<sup>68</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 21.

<sup>69</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 21.

<sup>70</sup> AEC, Submission to Consultation Paper, 4 February 2016; CS Energy, Submission to Consultation Paper, 4 February 2016; ERM Power, Submission to Consultation Paper, 1 February 2016.

<sup>71</sup> AEC, Submission to Consultation Paper, 4 February 2016, p. 2.

while maintaining opportunities for shorter qualifying ex ante reallocations.<sup>72</sup> The Australian Energy Council (AEC) noted that option 2 may maximise the efficiency gains of reallocations, however, having to provide credit support within one business day may be a difficult requirement for smaller market participants to meet.<sup>73</sup>

The submission from the AEC supported option 3, extending the reallocation timetable to 14 days. Support for this option is predicated on the understanding that AEMO also shifts its timetable for the release of the initial MCL accordingly. This would mean that participants still have the same number of days from the date of the initial MCL to finalise their reallocations.<sup>74</sup> ERM Power considered option 3 feasible but inferior to option 2. Option 3 may diminish the choice of reallocation products available and flexibility to participants for using reallocations as a risk management tool. The AEC also noted that option 3 may reduce the choice of reallocation products available to market participants.<sup>75</sup>

The AEC stated that option 4, partial offsets, provides limited risk reduction and was therefore not preferred.<sup>76</sup>

## **4.3 Analysis**

### **4.3.1 The prudential risk**

In its rule change proposal, AEMO estimated the impact of the proposed Rule on the prudential probability of exceedance (POE). The prudential standard sets the value of the prudential POE at 2%.

The AEMC engaged Promontory Australasia (Promontory) to verify AEMO's modelling results. Promontory's report was published with the Draft Determination.<sup>77</sup>

The Commission has noted Promontory's overall finding that the proposed Rule would not impact the ability of AEMO to meet the prudential standard, and does not pose material additional prudential risk to the NEM.<sup>78</sup>

The Commission has also noted the following observations made by Promontory, which relates to specific aspects of AEMO's analysis, such as the model (dubbed the 'POE model') used to determine whether the proposed Rule is consistent with the prudential standard:<sup>79</sup>

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<sup>72</sup> ERM Power, Submission to the Draft Determination, 9 August 2016, p.2.

<sup>73</sup> AEC, Submission to the Draft Determination, 11 August 2016.

<sup>74</sup> AEC, Submission to the Draft Determination, 11 August 2016.

<sup>75</sup> ERM Power, Submission to the Draft Determination, 9 August 2016, p.2.

<sup>76</sup> AEC, Submission to the Draft Determination, 11 August 2016, p.2.

<sup>77</sup> Promontory's report is available at <http://www.aemc.gov.au/Rule-Changes/Application-of-offsets-in-the-prudential-margin-ca>

<sup>78</sup> Promontory Australasia, Offsets in the Prudential Margin Economic Analysis, report prepared for the AEMC, 3 June 2016, pp. 27 & 32.

<sup>79</sup> Promontory Australasia, Offsets in the Prudential Margin Economic Analysis, report prepared for the AEMC, 3 June 2016, pp. 24.

- **Probability of exceedance at the market participant vs regional level:** a key assumption in the POE model is that a single retailer exists within each region. As such the model provides an estimate of the number of non-remedied default instances at the region level, but not the number of non-remedied market participant default instances at the market participant level. This means there may be instances where a market participant's outstandings may breach its trading limit, and subsequently exceed its MCL, but this exceedance may not be captured at the region level and reflected in the modelling results;
- **Reallocations:** the model assumes debit and credit reallocations are netted out within each region, and therefore reallocation amounts are not taken into account in the MCL calculation for the purposes of the POE model. In practice, this perfect offset of credit and debit reallocations within a region is unlikely to always occur, as market participants are likely to have different levels of debit and credit reallocations within a region;
- **Consistency with the CLP:** while the exclusion of reallocations from the POE analysis is likely to result in a conservative estimate of the MCL in the model, Promontory note this approach deviates from the approach set out in the CLP and may lead to a calibration of the OSL and prudential margin parameters that could be inconsistent with the prudential standard.
- **Reduction in MCL requirements:** the model allocates the reduction in MCL proportionally across the regions, by regional market share. In practice, the allocation of MCL savings may not exactly align this way, which may lead to an overestimate or underestimate of the MCL in a region;
- **Use of historical data:** the model draws on life-of-NEM data (from the time of the NEM's commencement, in December 1998), which may reduce its relevance in estimating (and calibrating) future POEs. Promontory updated the model drawing on ten and five years' worth of data in order to observe trends or more recent increases in the number of MCL exceedances (Table 4.2). The results show that there is an increase in the prudential POE under the proposed Rule, although the increases are not considered to be material.

**Table 4.2 Prudential POE estimates (five and ten years' worth of data)**

NEM region	Five years		Ten years	
	Current Rules	Proposed Rule	Current Rules	Proposed Rule
NSW	0.27%	0.38%	1.92%	1.97%
QLD	0.88%	0.93%	2.14%	2.16%
SA	0.93%	1.20%	2.19%	2.33%
TAS	1.42%	1.48%	2.24%	2.27%
VIC	0.11%	0.16%	2.14%	2.16%

### 4.3.2 Appropriate allocation of risks

While AEMO's proposal does not increase the likelihood of market participant default in the NEM, it may reduce the amount of credit support available to cover any liabilities accruing during the reaction period in the event that a market participant defaults.<sup>80</sup>

By allowing for offsetting between reallocation and trading amounts in the calculation of the prudential margin, the proposed Rule changes the way that prospective reallocations, generation offsets (for net positive trading amounts) and load offsets (for net negative trading amounts) may be treated during the reaction period. These offsets are considered "firm" if the trading amounts and reallocation amounts continue throughout the reaction period. To the extent that these amounts are not firm (potentially because they may unexpectedly cease during the reaction period), there is a risk that the credit support available may be insufficient to cover the market participant's liabilities, which can represent a prudential risk.

The Commission has noted Promontory's advice that the proposed Rule could result in the inclusion of some non-firm reallocation and/or generation offsets in the prudential margin calculation. These are discussed further below.

#### Reallocation offsets

AEMO's MCL calculation assumes that reallocations last 42 days (35 days for the OSL calculation and 7 days for the prudential margin calculation). A reallocation that expires or is deregistered within that period could result in a potential shortfall in the amount of credit support held by AEMO to cover liabilities accrued during the reaction period. A reallocation may fail to be rolled over or registered for the following reasons:

- a party to the reallocation transaction defaults;
- the premiums for the reallocation are no longer economically feasible for either party; or
- the seven day ex-ante reallocation timetable for registering reallocations with AEMO has not been met.

A reallocation may also be deregistered during the reaction period by AEMO if one party defaults or if both parties request the deregistration of the reallocation.

As noted in section 4.1.2, AEMO has identified possible improvements to its existing processes in place to ensure the firmness of reallocations.

As the proposed Rule may reduce the MCL held by AEMO, there are additional prudential risks that must be mitigated by ensuring that reallocations are firm in all circumstances during the reaction period. In its submission to the AEMC's consultation paper, AEMO provided three options to mitigate these additional risks. These options were discussed briefly in section 4.1.2, and are discussed further below.

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<sup>80</sup> The extent to which the credit support available to AEMO is reduced will depend on whether, and the extent to which AEMO allows offsetting. AEMO is not compelled to offset reallocation and trading amounts under either the proposed Rule or final Rule.

## **Option 2: Implement offsetting between reallocation and trading amounts and ensure MCL increases are effective after one business day<sup>81</sup>**

Currently, AEMO gives market participants up to seven days to respond to MCL requests as the MCL review is often prepared up to one month ahead of an expected change in MCL settings. However, under the proposed Rule, in order to mitigate the prudential risk of exposing the NEM to a potential payment shortfall in the case that the reallocation ceases (either by expiring or being deregistered) AEMO may need to require market participants to provide additional credit support within 24 hours (under clause 3.3.6(b)).

In its submission to the consultation paper, AEMO proposed to establish a seven day-ahead reallocation alert that would run daily on each market participant. The purpose of this alert would be to compare the reallocation amounts used in the market participant's MCL calculation to the actual reallocation request registered with AEMO. In the event the actual reallocation amount (over the coming seven days) falls, relative to the MCL settings, AEMO will immediately conduct a MCL review and if necessary require additional credit support be provided.<sup>82</sup> This is demonstrated in Figure 4.1 where a market participant's reallocation is due to expire on Day 0:

- Day -6: using alert system, AEMO identifies the reallocation expiry at 4.00pm;
- Day -5: AEMO performs the MCL review and notifies the market participant of the need to provide additional credit support;
- the market participant is given 24 hours to respond to the MCL request and fails to do so;
- Day -3: AEMO issues a Default Notice (under clause 3.15.21(b)(1));
- the market participant fails to respond (or responds inadequately) to the Default Notice;
- Day -2: AEMO issues a Suspension Notice; and
- Day -1: AEMO transfers the market participant's customers to Retailer of Last Resort (ROLR) and draws on the market participant's credit support to meet any liabilities accrued.

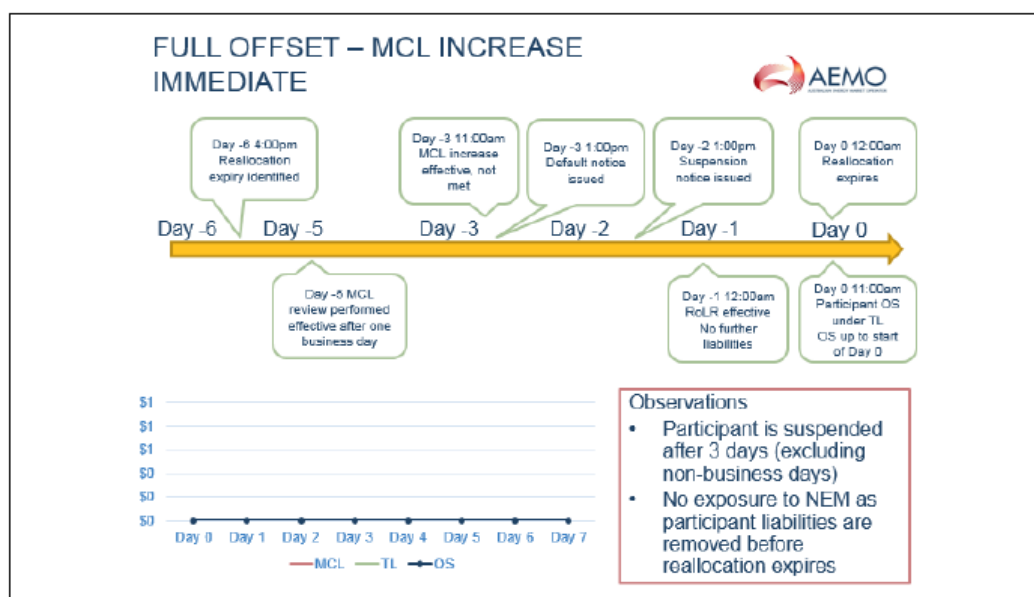
At this point, the market participant cannot accrue any further liabilities and the outstandings remain under the trading limit and there is no shortfall and no exposure to the NEM in 98 out of 100 occasions.

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<sup>81</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 3.

<sup>82</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 3.

**Figure 4.1 Immediate increase in MCL (clause 3.3.6(b))<sup>83</sup>**



However, AEMO noted that:

“enforcing the one business day credit support rule could potentially compound the existing advantage conferred to the major gentailers, as smaller retailers and generators will find it challenging to provide bank guarantees in such short time.”<sup>84</sup>

**Option 3: extend the ex-ante reallocation timetable (AEMO’s preferred option)<sup>85</sup>**

AEMO noted in its submission to the consultation paper that it could extend the ex-ante reallocation timetable from seven to 14 business days. This change would require market participants to lodge reallocation requests 14 days ahead of the trading interval to which the reallocation applies.

AEMO noted that in relation to energy reallocations:<sup>86</sup>

- more than 95% have a term of three months or more;
- less than 1% are submitted on a weekly basis; and
- less than 2% are authorised after the ex-ante due date.

By changing the timetable, AEMO could continue giving market participants up to 7 days to respond to a request for additional credit support without any increase in the prudential risks to the NEM under the proposed Rule. This is demonstrated in Figure 4.2, where a market participant’s reallocation is due to expire on Day 0:

- Day -13: using alert system, AEMO identifies the reallocation expiry at 4.00pm;

<sup>83</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 3.

<sup>84</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 3.

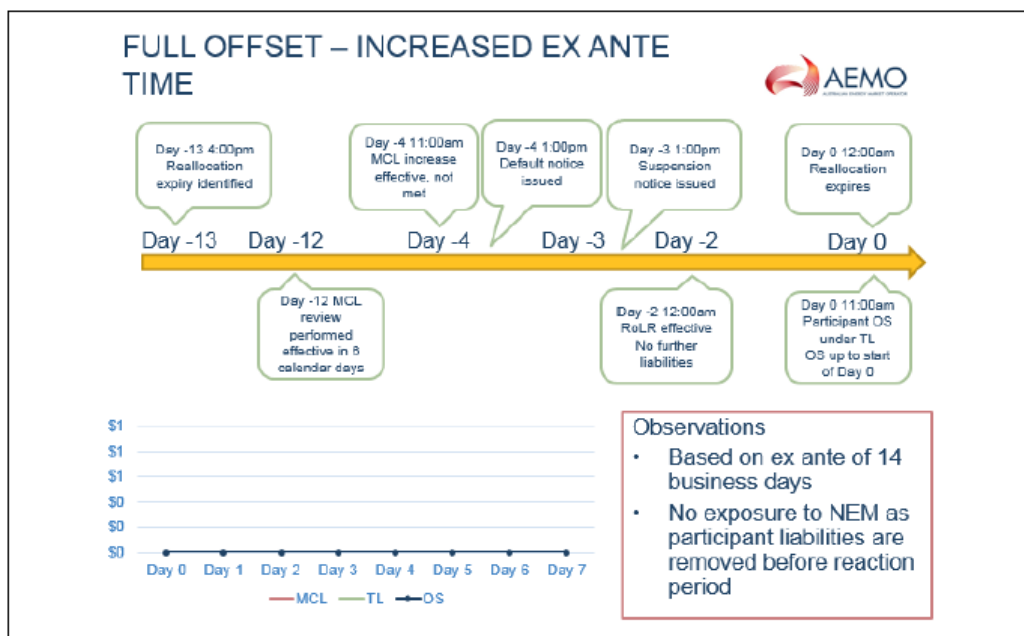
<sup>85</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 4.

<sup>86</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 4.



- Day -12: AEMO performs the MCL review and notifies the market participant of the need to provide additional credit support;
- the market participant is given 6 days to respond to the MCL request and fails to do so;
- Day -4: AEMO issues a Default Notice (under clause 3.15.21(b)(1));
- the market participant fails to respond (or responds inadequately) to the Default Notice;
- Day -3: AEMO issues a Suspension Notice; and
- Day -2: AEMO transfers the market participant’s customers to Retailer of Last Resort (ROLR) and draws on the market participant’s credit support to meet any liabilities accrued.

**Figure 4.2 Extend the ex-ante reallocation timetable to 14 days<sup>87</sup>**



Under this option, a market participant is given approximately one week to respond to a request for additional credit support. AEMO considered “this option will give participants sufficient time to provide bank guarantees without increasing the prudential risks to the NEM.”<sup>88</sup>

To implement this change, AEMO noted that it will need to amend its reallocation procedures and CLP and this may take up to six months from the date any final Rule is made.<sup>89</sup>

AEMO considers this option best meets the objectives of the proposed Rule and the NEO.<sup>90</sup>

<sup>87</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 4.

<sup>88</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 5.

<sup>89</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 6.

#### **Option 4: Partial offsets<sup>91</sup>**

AEMO submitted that a fourth option for ensuring firmness of reallocations is to allow partial offsetting between reallocation and trading amounts in the market participant's prudential margin calculation.

AEMO considered that it could reduce the risk by allowing up to five days of offsets in the prudential margin. To implement this change, AEMO noted that it will need to amend its reallocation procedures and/or its CLP and this may take up to six months from the date any final Rule is made.<sup>92</sup>

#### **Generation offsets**

As noted in section 4.1.2, AEMO considers generation offsets to be firm in most circumstances. However, the failure of a generating unit could result in a prudential risk if the reduction in generation occurred during the reaction period and the generation is no longer available to offset against the load or reallocation amount.<sup>93</sup> In this circumstance, the generation amount would no longer be considered firm and could lead to a potential shortfall in the amount of credit support collected by AEMO to cover liabilities accrued during the reaction period.

The Commission notes that AEMO proposes to mitigate the risk of a payment shortfall due to the loss in generation by implementing a low generation alert. In the event that a potential generation loss is detected, AEMO will immediately conduct a MCL review and may require additional credit support to be provided.<sup>94</sup>

The Commission notes both AEMO's submission and Promontory's advice that while, overall, the proposed Rule does not pose material prudential risk to the NEM, within AEMO's current systems and processes there is a risk that some non-firm offsets could be included in the prudential margin calculation. Promontory noted the mitigating strategies (as discussed above) should be implemented ahead of the proposed Rule being implemented.<sup>95</sup>

## **4.4 Conclusions**

On balance, the Commission considers that the proposed Rule is unlikely to result in a breach of the prudential standard; that is, the proposed Rule does not pose a material risk to the NEM. On this basis, the Commission has determined to make a final Rule that, consistent with the proposed Rule, removes the existing prohibition in clause 3.3.8(e) of the NER on offsetting between trading and reallocation amounts in the prudential margin calculation.

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<sup>90</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 2.

<sup>91</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 5.

<sup>92</sup> AEMO, Submission to Consultation Paper, 17 February 2016, pp. 5-6.

<sup>93</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 21.

<sup>94</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 6.

<sup>95</sup> Promontory Australasia, Offsets in the Prudential Margin Economic Analysis, report prepared for the AEMC, 3 June 2016, pp. 32-33.

The Commission considers that the options for managing prudential risk outlined by AEMO in its submission, and the advice provided by Promontory, to be relevant to the Commission's considerations. This is because both the final Rule and the proposed Rule would require that AEMO consider options to mitigate the risk that non-firm offsets are included in the prudential margin calculation.

The Commission notes Promontory's observations in relation to the POE model. In particular, the Commission notes the material increase in exceedance values for 2015 under the proposed Rule and the advice that this increase is as a result of the volatility factors not being calibrated for 2015. The Commission understands that the calibration of volatility factors may have the effect of increasing the MCL required for market participants, which may reduce some of the benefits of the proposed Rule and, accordingly, the final Rule. The Commission encourages AEMO to consider whether volatility factors, and other key parameters used by AEMO to determine the prudential settings, should be updated prior to the prohibition on offsetting being removed under the final Rule.

Non-firm offsets in the prudential margin calculation could occur under the final Rule, as discussed in section 4.3.2. However, the Commission considers that it is appropriate for such risks to be identified and managed by AEMO through changes to its systems and procedures rather than to include any additional prescription in the Rules regarding the management of such risks.

In its submission to the consultation paper, AEMO put forward three options designed to mitigate the prudential risk associated with the proposed Rule. These options require amendments to the CLP, and possibly also the reallocation procedures and reallocation timetable. The Commission considers there may be other options available to AEMO to manage this risk and encourages stakeholders to engage in the consultation process for amending AEMO's procedures to support changes made under the final Rule.<sup>96</sup>

The final Rule includes a transitional rule requiring AEMO to update its CLP, reallocation procedures and reallocation timetable, as required, by 1 July 2017 to take into account the final Rule. The removal of the current clause 3.3.8(e) will take effect from 20 October 2017. The time between when the requisite changes to AEMO's procedures are made (if any) and when the changes to Chapter 3 of the NER commence has been provided for AEMO to update its internal systems to reflect the changes to the NER and its procedures. This time has also been provided to allow market participants to make any necessary changes to their systems or processes.

Whilst requisite changes to AEMO's procedures must be published by 1 July 2017, offsetting of trading amounts and reallocation amounts in respect of the prudential margin (if permitted by AEMO) cannot occur prior to 20 October 2017 under the final Rule. AEMO has indicated its intention to begin to allow offsetting of trading and reallocation amounts in market participants' MCL reviews for the summer 2017/2018 season, which begins on 1 December 2017.

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<sup>96</sup> The final Rule includes a transitional rule requiring AEMO to update the CLP and reallocation procedures by 1 July 2017. A further five months has been allowed in order for AEMO to update its internal systems to reflect the changes to the NER and its procedures.

In some cases, the proposed Rule could enable participants to reduce their MCL to a very low level (or zero). The Commission notes that by removing clause 3.3.8(e) of the NER, there is a risk that the prudential margin may be reduced to below zero. Whilst the Commission considers that a prudential margin equalling a negative amount is unlikely given the purpose of the prudential margin and the requirement that AEMO must determine the prudential margin to meet the prudential standard<sup>97</sup>, the Commission has determined to include a requirement in the final Rule that the prudential margin must not be a negative amount to eliminate any prudential risks associated with a prudential margin that could be less than zero. Whilst AEMO cannot determine a prudential margin that is a negative amount under the final Rule, AEMO will have the discretion to determine what non-negative amount the prudential margin should be in accordance with the credit limit procedures and in order to meet the prudential standard.

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<sup>97</sup> See clause 3.3.8(j) of the NER. Under cl. 3.1.1A the prudential margin is defined as the allowance made by AEMO in determining a market participant's MCL for the accrual of the market participant's outstandings during the reaction period.

## 5 Impact on competition

This chapter considers the impact of the final Rule on competition. Specifically, the Commission has considered whether the treatment of offsetting trading amounts and reallocation amounts would reduce barriers to entry or expansion for smaller market participants. The Commission has also considered AEMO's argument that the proposed Rule will remove the unequal treatment of market participants with equivalent financial exposure in the NEM.<sup>98</sup>

### 5.1 AEMO's view

AEMO considers that the restriction on offsetting trading and reallocation amounts in the prudential margin contained in clause 3.3.8(e) results in unequal treatment of market participants with similar financial exposure in the NEM.<sup>99</sup>

In the rule change request, AEMO argued that clause 3.3.8(e) results in higher costs than necessary of providing credit support. These costs are higher than the benefits, and may therefore represent an inefficient and excessive barrier to entry. AEMO estimated that the savings resulting from reduced credit support requirements could be \$0.92-\$2.4 million per year<sup>100</sup>, across all market participants (originally estimated to be \$200,000-\$500,000 per year).<sup>101</sup>

Furthermore, AEMO argued, these costs are disproportionately borne by non-vertically integrated retailers and generators, as these market participants are required to provide more credit support than gentailers even when all three have the same economic exposure (see Figure 2.1).<sup>102</sup>

AEMO considers that the removal of the restriction in clause 3.3.8(e) will enhance competition by reducing barriers to entry, especially for smaller market participants who do not have generation capacity to offset load and who currently face higher relative costs for obtaining credit support compared to their larger, vertically integrated competitors.<sup>103</sup>

However, in AEMO's submission to the AEMC's consultation paper, it noted that if it were, as per its option 2, to mitigate the prudential risks associated with the proposed Rule by requiring all market participants to respond to MCL reviews and requests for additional credit support within 24 hours, this could:

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<sup>98</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 19.

<sup>99</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 19.

<sup>100</sup> Promontory Australasia, Offsets in the Prudential Margin Economic Analysis, report prepared for the AEMC, 3 June 2016, p. 24.

<sup>101</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 16.

<sup>102</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 16.

<sup>103</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 19.

“potentially compound the existing advantage conferred to the major gentailers, as smaller retailers and generators will find it challenging to provide bank guarantees in such short time.”<sup>104</sup>

## **5.2 Stakeholder views**

### **5.2.1 First round of consultation**

In their submissions to the consultation paper, CS Energy and the AEC highlighted the estimated reductions in MCL and credit support costs associated with the proposed Rule and noted that these cost savings should promote competition by reducing barriers to entry.<sup>105</sup>

ERM Power noted that the current restriction provides a competitive advantage to vertically integrated market participants. By removing the restriction, ERM consider that independent retailers and generators will be able to compete on equivalent terms, supporting competition. ERM also expect this will also reduce the barriers to entry, as entrants’ collateral requirements will be more efficient.<sup>106</sup>

### **5.2.2 Second round of consultation**

ERM Power reiterated their comments regarding the effect of the rule change on competition in its submission to the Draft Determination. ERM Power consider that the draft Rule would allow collateral to be used more efficiently, easing barriers to entry for prospective retailers, while maintaining the prudential standard. The submission also stated that the draft Rule removes the competitive advantage held by vertically-integrated market participants and allows for a more level basis for competition.<sup>107</sup>

## **5.3 Analysis**

### **5.3.1 Barriers to entry**

The Commission considers that prudential requirements are necessary to safeguard the integrity of the NEM. In setting the appropriate prudential settings there is a need to ensure that credit support requirements are at a level that is appropriate to maintain the prudential standard but are not so high as to represent an inefficient use of market participant capital. The costs of credit support for market participants should therefore be reflective of the financial risk that the market participant poses to the NEM.

AEMO argued in its rule change request that a consequence of the proposed Rule would be the achievement of the prudential standard at a lower cost. As a result, less market participant capital would be tied up to support the provision of credit support. This would allow market participants to invest in other, wealth-generating, areas of

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<sup>104</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 3.

<sup>105</sup> AEC, Submission to Consultation Paper, 4 February 2016; CS Energy, Submission to Consultation Paper, 4 February 2016.

<sup>106</sup> ERM Power, Submission to Consultation Paper, 2 February 2016.

<sup>107</sup> ERM Power, Submission to the Draft Determination, 9 August 2016.

their business, thereby enhancing the efficiency, and potentially profitability, of market participants, and the efficiency of the NEM.

Inefficient costs can discourage new entrants from entering the market. Requirements that impose credit support requirements at inefficiently high levels can therefore represent a barrier to entry.

The removal of these inefficient costs may reduce barriers to entry, or barriers to expansion, for market participants. Under the proposed Rule, the level of credit support would be more reflective of the financial risk that these market participants pose to the NEM. The reduction in costs as a result of the proposed Rule would make the costs of providing credit support more equal to the benefits provided by that credit support.

Promontory conducted an economic analysis of the proposed Rule and estimated the cost savings that will accrue to market participants as a result of this rule change. The cost savings are summarised in Table 5.1.<sup>108</sup>

**Table 5.1 Credit support cost savings (\$ million per annum (p.a.))**

Market Participant types	Bank guarantee cost at 1.5% p.a.		Bank guarantee cost at 4% p.a.	
	Summer 2014	Summer 2015	Summer 2014	Summer 2015
Retailer	0.32	0.19	0.85	0.50
Gentailer	0.52	0.46	1.38	1.30
Generator	0.09	0.04	0.23	0.11
Total	0.92	0.72	2.46	1.91

Note: The figures for cost savings are aggregated across all market participants of a given type.

The figures given above are estimated cost savings as a result of the reduction in MCL requirements. The table shows that the extent of the cost savings as a result of the reduction in MCL requirements will depend on the cost of funding faced by an individual market participant. The above range of cost savings are based on assumed costs of bank guarantees of between 1.5% and 4% per annum. These figures were provided in AEMO's rule change proposal<sup>109</sup> and Promontory<sup>110</sup> consider them to be an appropriate estimate of the cost of credit support faced by market participants.

<sup>108</sup> Promontory Australasia, Offsets in the Prudential Margin Economic Analysis, report prepared for the AEMC, 3 June 2016, p. 31.

<sup>109</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 16.

<sup>110</sup> Promontory Australasia, Offsets in the Prudential Margin Economic Analysis, report prepared for the AEMC, 3 June 2016, p30.

Promontory found that the proposed Rule results in a 7% reduction in MCL (that is, a 7% fall in the amount of credit support provided), without posing material additional prudential risk to the NEM.<sup>111</sup>

Furthermore, it is reasonable to assume that new entrant or smaller market participants would face a higher cost of capital than larger, vertically-integrated gentailers.

Therefore, the cost reductions would remove a barrier to entry or a barrier to expansion for new or smaller market participants.

### **5.3.2 Impact of the proposed Rule by type of market participant**

The above discussion shows that the proposed Rule would result in benefits in the form of cost reductions for market participants. However, the distribution of these benefits across categories of market participants is also worthy of consideration. AEMO argued that the proposed Rule would remedy the unequal treatment of market participants with equivalent financial exposure under the current prudential settings.<sup>112</sup>

In AEMO's view, the ability of gentailers to offset generation with load gives them an unfair advantage over market participants who are not vertically integrated. AEMO argued that the proposed rule would reduce this advantage by allowing retailers and generators to offset between trading and reallocation amounts.<sup>113</sup>

In determining whether the proposed Rule would result in a more equal outcome for standalone retailers and generators relative to gentailers the impact of the proposed Rule on different categories of market participants is considered below. This discussion is informed by Promontory's economic analysis.

The charts below show the reduction in MCL requirements for summer 2014 and summer 2015 by type of market participant category (gentailers, retailers and generators).

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<sup>111</sup> See Promontory Australasia, *Offsets in the Prudential Margin Economic Analysis*, report prepared for the AEMC, 3 June 2016, p32 and Section 7.3.1.

<sup>112</sup> AEMO, *Electricity Rule Change Proposal, Offsets in the Prudential Margin*, 28 May 2015, p. 19.

<sup>113</sup> AEMO, *Electricity Rule Change Proposal, Offsets in the Prudential Margin*, 28 May 2015, p. 19.



**Figure 5.1 Reduction in MCL requirements by market participant type, summer 2014 and summer 2015 (\$ million)**



The size of the reduction in MCL by market participant type reflects the share of total MCL requirements provided by that market participant type, as well as the share of prospective reallocations that are used by that type of market participant.

The proportion of MCL savings per market participant type relative to their share of the total MCL requirements, is summarised in Table 5.2 below:

**Table 5.2 MCL savings and requirements (%)**

Market Participants	Summer 2014		Summer 2015	
	Current MCL	MCL savings	Current MCL	MCL savings
Retailer	21.6%	34.5%	25.4%	26.3%
Gentailler	77.8%	56.1%	73.2%	68.0%
Generator	0.65%	9.41%	1.47%	5.62%

During summer 2014, it appears that retailers and generators receive a disproportionate share of the MCL savings relative to their share in total MCL requirements. In contrast, during summer 2015, this is not clear as the shares of MCL savings are closer to the share of total MCL by market participant type.

The Commission considers that there is some evidence that the proposed Rule would reduce the advantage that gentailers have under the current prudential arrangements. In particular, Table 5.2 reveals that gentailers' share of the MCL savings being lower than their share of total MCL amounts. A more compelling form of evidence of a reduction in gentailers' competitive advantage would be where gentailers' share of the MCL savings was lower than that of other market participant types, which is not the case in Table 5.2. Consequently, the Commission considers the argument that the proposed Rule would reduce the advantage that gentailers have under the current prudential arrangements to not be compelling.

The Commission has determined to make a final Rule that, consistent with the proposed Rule, removes the existing prohibition in clause 3.3.8(e) of the NER on offsetting between trading and reallocation amounts in the prudential margin calculation. The Commission considers that the estimated benefits of the proposed Rule also apply with respect to the final Rule given the consistency between the proposed and final Rules.

The benefits of the final Rule for smaller market participants may be lessened, depending on changes to AEMO's procedures. If option 2<sup>114</sup>, as proposed by AEMO, is chosen, market participants would have to provide credit support within one business day. This fast turnaround to provide credit support may be infeasible or very costly for smaller market participants. This may lower the extent of any reduction in competitive advantage of larger market participants, particularly for large, vertically integrated market participants who have easier access to finance and could arrange for additional credit support relatively quickly. AEMO acknowledged this potential difficulty in their submission to the AEMC's consultation paper.<sup>115</sup>

## 5.4 Conclusions

The Commission is satisfied that the final Rule will, or is likely to, contribute to the NEO, because it would reduce barriers to entry in the following ways:

- Inefficient costs imposed by a market participant's entry to the NEM may deter potential market participants from entering. The final Rule would support a reduction in MCL requirements without breaching the prudential standard and therefore represents an efficient cost saving for market participants.
- New entrants to the market or smaller market participants face higher relative costs for obtaining credit support compared to larger, vertically integrated competitors. A reduction in MCL requirements would therefore reduce barriers to entry or expansion for such market participants.

However, the Commission considers that there is limited evidence to support AEMO's assertion that the removal of the prohibition on offsetting between trading and reallocation amounts would reduce the advantage enjoyed by gentailers relative to standalone retailers or standalone generators, with respect to credit support requirements.

Firstly, the final Rule, consistent with the proposed Rule, would still allow offsetting of a gentailer's generation and load. This means that there would continue to be an alternative way for gentailers to reduce their MCL requirements that is not available to standalone retailers and generators.

The estimated reduction in MCL requirements show that retailers and generators may gain a larger share of the MCL savings under the proposed Rule, than that implied by their share of overall MCL requirements. However, the bulk of the potential MCL savings still accrue to gentailers. Furthermore, the analysis provided above was conducted only for two seasons and may not be representative of the MCL savings, and

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<sup>114</sup> This option is discussed in more detail in Section 4.3.2 and illustrated in Figure 4.1

<sup>115</sup> AEMO, Submission to Consultation Paper, 17 February 2016, p. 2.

the distribution of savings by type of market participant, for other seasons. Therefore, the argument relating to levelling the playing field between gentailers and standalone retailers and generators appears somewhat tenuous.

In addition, gentailers are currently extensive users of prospective allocations. As gentailers are larger in size they may have more sophisticated internal financial systems and processes in place. The benefits of the final Rule will only accrue to market participants that use prospective reallocations; therefore gentailers may benefit more relative to retailers and generators. AEMO estimate that approximately 25 per cent of market participants currently use ex-ante reallocations.<sup>116</sup>

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<sup>116</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 11.

## 6 Regulatory certainty

This chapter considers the importance of regulatory certainty in the context of the proposed Rule. In particular, the Commission has considered whether the proposed Rule provides an appropriate balance between providing certainty to market participants in relation to the treatment of reallocation and generation offsets in the prudential margin calculation, and the need for AEMO to retain some flexibility and discretion in relation to developing the methodology to determine the prudential settings to apply to market participants.

### 6.1 AEMO's view

In its submission to the AEMC's consultation paper, AEMO noted that the combination of removing existing clause 3.3.8(e), and the application of clause 3.3.8(d), would give AEMO the flexibility to apply partial offsets in the calculation of a market participant's prudential margin. Partial, rather than full, offsetting may occur if and when AEMO has concerns about the firmness of a market participant's reallocation and generation amounts. While such discretion may be important in allowing AEMO the ability to maintain the prudential standard, this may also create regulatory uncertainty amongst market participants about the extent of offsetting between reallocation and generation amounts.

To reduce this uncertainty, AEMO noted, in its submission to the AEMC consultation paper, that it could provide guidance on the extent of offsetting in the prudential margin calculation. AEMO provides an example of such guidance by noting that the extent of partial offsetting could be the equivalent of up to five days of offsets, compared to seven days under full offsetting, such that the prudential standard is maintained.<sup>117</sup>

### 6.2 Stakeholder views

#### 6.2.1 First round of consultation

There were mixed views in response to questions in the AEMC's consultation paper in relation to regulatory certainty. The AEMC sought views on the discretion contained in clause 3.3.8 that allows AEMO to develop the methodology used to determine the prudential settings to apply to market participants, and whether regulatory transparency would be improved by specifying in the NER that AEMO must allow for offsets in the prudential margin calculation.<sup>118</sup>

ERM Power and ENGIE (formerly GDF Suez Australia, GDFSAE) stated that, in the interests of regulatory certainty, any discretion on the part of AEMO, in determining the extent of offsetting, should be removed and the NER or Procedures should include a

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<sup>117</sup> This is AEMO's Option 4 in its submission; for more details, see AEMO, Submission to Consultation Paper, 17 February 2016, p. 5.

<sup>118</sup> AEMC, National Electricity Amendment (Application of Offsets in the Prudential Margin Calculation) Rule 2015, Consultation Paper, 10 December 2015, pp. 44-45.

requirement that AEMO fully offset reallocation amounts and trading amounts in the prudential margin calculation.

The submission from the AEC stated that it did not consider it necessary that AEMO be required by the Rules to offset reallocation and trading amounts because AEMO had already stated that this is what they will do if the Rule is made.<sup>119</sup>

### **6.2.2 Second round of consultation**

AEMO's submission to the Draft Determination focused on the transitional rules that impose a requirement to amend the reallocation procedures and the timing of implementation of the draft Rule.

Firstly, on the requirement to amend the reallocation procedure, AEMO indicated that it intends to consult on a proposal to remove the reallocation timetable from the reallocation procedures so that it forms a standalone timetable. AEMO stated that this consultation process is expected to commence in August 2016 as part of the package of amendments associated with the implementation of swap and options reallocations.<sup>120</sup> AEMO stated that if the reallocation timetable is removed from the reallocation procedure, no subsequent amendments would be required to the reallocation procedures as a result of the final Rule being made (provided that the final Rule has a similar effect to the draft Rule). AEMO suggested that the transitional arrangements in the final Rule should reflect this possibility.<sup>121</sup>

Secondly, on the timing of implementation of the final Rule, AEMO's submission stated that its objective is to take offsetting of trading and reallocation amounts into account in the MCL reviews for the summer 2017/2018 season. The summer season commences on 1 December 2017. For this to be achieved, AEMO stated that it would need to rely on the Rules (as amended under this rule change) when determining a market participant's prudential setting in advance of 1 December 2017, in accordance with the amended credit limit procedures and AEMO's normal processes. More specifically, if the removal of existing clause 3.3.8(e) does not come into effect before that date, AEMO argue that it would not have the ability to allow offsetting of trading and reallocation amounts for the summer season.<sup>122</sup>

AEMO suggested that both schedules of the draft Rule (namely, the schedule setting out the transitional provisions and the schedule setting out the changes to Chapter 3 of the NER) could commence on the same date a short time after the Rule is made, as the Commission considers appropriate. AEMO suggested that the transitional rules could indicate that the credit limit procedures and reallocation timetable (to be revised by 1 July 2017) must have an implementation date that requires AEMO to apply their amended methodology in determining prudential settings applicable to the summer

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<sup>119</sup> AEC, Submission to the Consultation Paper, 8 February 2016.

<sup>120</sup> The 2016 NEM Reallocation procedures consultation began on 12 August 2016. See: <http://www.aemo.com.au/Stakeholder-Consultation/Consultations/2016-NEM-Reallocation-Procedures-Consultation>

<sup>121</sup> AEMO, Submission to the Draft Determination, 9 August 2016.

<sup>122</sup> AEMO, Submission to the Draft Determination, 9 August 2016.

season commencing on or around 1 December 2017. This, AEMO argued, should clarify that AEMO is not required to consider exercising its discretion in respect of those amounts before the summer 2017/18 review.<sup>123</sup>

## 6.3 Analysis

### 6.3.1 The NER and AEMO's Procedures

Market participants' confidence in the financial settlement of spot electricity transactions is critical to the operation of the NEM and setting the spot market price. In order for the NEM to operate effectively, market rules must be clear and enforceable. The NEM's prudential framework, as part of the broader regulatory framework in the NEM, should be flexible, and provide market participants with a clear, transparent and consistent set of rules that allow them to independently develop business strategies and models to adjust to changes in the market.

The prudential framework for the NEM is set out in rule 3.3 of the NER, and the Rules are supplemented by AEMO's CLP. The NER provides AEMO with a reasonably broad level of discretion in developing the methodology used to determine the prudential settings (i.e. the MCL, OSL and prudential margin). However, this discretion is limited in the following two ways:

1. The prudential standard – the prudential standard (NER cl. 3.3.4A) is the overarching principle that limits AEMO's discretion in determining the prudential settings. For example, clause 3.3.8(b) and clause 3.3.8(i) together require that AEMO must determine the prudential settings (i.e. the MCL, OSL, and prudential margin) such that the prudential standard is met for the NEM. The prudential standard also limits the scope of AEMO's CLP (clause 3.3.8(b)).<sup>124</sup>
2. AEMO's CLP – provides a detailed discussion of the methodology used by AEMO to determine the prudential settings for each market participant in such a way that the prudential standard is met for the NEM. Furthermore, AEMO must, under clause 3.3.8(g), comply with the Rules consultation procedures when amending the CLP. The detailed discussion contained in the CLP provides regulatory certainty and transparency to market participants about the manner in which AEMO determines the prudential settings.

In this way, the Rules and AEMO's CLP together provide an appropriate degree of regulatory certainty to market participants about the manner in which the prudential settings are determined.

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<sup>123</sup> AEMO have subsequently indicated to the Commission that removing the current prohibition on offsetting of trading and reallocation amounts in the prudential margin calculation on 20 October 2017 would provide AEMO with sufficient time to consider offsetting of reallocation and trading amounts, should they determine to permit such offsetting, when determining market participants' MCLs for the summer 2017/18 season.

<sup>124</sup> Cl 3.3.8(b) specifies that the CLP's objective 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.

### 6.3.2 AEMO's discretion under the final Rule

The Commission considers that the final Rule is consistent with the level of discretion granted to AEMO under certain existing NER for the purposes of developing the methodology used by AEMO to determine the prudential settings to apply to market participants. The Commission is satisfied that the final Rule, in addition to the existing Rules (such as clauses 3.3.8(c), (f) and (g)), are sufficient in guiding AEMO's discretion and providing transparency in the methodology they use to determine the prudential settings.

Furthermore, the Commission considers that the prudential standard remains the overarching principle in limiting AEMO's discretion in determining the extent of offsetting between reallocation amounts and trading amounts.

AEMO indicated in their submission to the Draft Determination that it intends to consult on moving the reallocation timetable from the reallocation procedures to a standalone document. The Commission considers that AEMO is best placed to determine any requisite changes to its procedures resulting from changes made under the final Rule. The transitional arrangements under the final Rule has been altered slightly from the draft Rule to state that AEMO must amend the credit limit procedures, reallocation procedures and reallocation timetable "as required" to take into account the final Rule. This change clarifies that changes to each of the credit limit procedures, reallocation procedures and the reallocation timetable may not be necessary, namely, the extent of such changes will depend on whether AEMO exercises its discretion to permit offsetting and the nature of such offsetting.

Key elements of the final Rule that appropriately limit AEMO's discretion on the extent of offsetting, and which differentiate it from the proposed Rule, include:

- prescribing in the Rules that the prudential margin must be non-negative, a requirement which is consistent with the purpose of the prudential margin; and
- requiring AEMO to update the CLP, reallocation procedures and reallocation timetable, as required, in accordance with the Rules consultation procedures, to take into account the final Rule.

The updating of AEMO's procedures should be done by 1 July 2017 to provide sufficient time for market participants to consult with AEMO on the methodology in the CLP, and on potential changes to the reallocation procedures and the reallocation timetable. The time between the publication of updated procedures and the changes to clause 3.3.8 becoming effective on 20 October 2017 is to allow sufficient time for AEMO and market participants to implement relevant internal processes should offsetting between trading and reallocation amounts be permitted by AEMO.

The date on which changes to clause 3.3.8 under the final Rule becomes effective has been moved forward to 20 October 2017 in order that AEMO has sufficient time to allow for offsetting of trading and reallocation amounts when conducting MCL reviews for market participants for the summer 2017/2018 season, should AEMO determine to permit such offsetting. The Commission notes that AEMO has indicated its intention that if the prohibition is removed it will allow offsetting for the summer period and that the final Rule allows for this to occur.

Requiring AEMO to update the CLP, reallocation procedures and reallocation timetable, to the extent such changes are necessary, will provide market participants with sufficient guidance as to how AEMO will exercise its discretion and so provide sufficient regulatory certainty in respect of the changes to clause 3.3.8 under the final Rule.

#### **6.4 Conclusions**

For the reasons noted above, the Commission is satisfied that the final Rule achieves an appropriate degree of regulatory certainty to market participants in relation to the treatment of reallocation and generation offsets in the prudential margin calculation. The Commission's approach to changes to the regulatory framework under the final Rule is consistent with the nature of the regulatory framework that exists under current Rule 3.3 of the NER.



## 7 Costs and benefits of implementation

This chapter considers the costs and benefits of AEMO's proposed Rule and the final Rule. The Commission considers the benefits of the proposed Rule to include estimates of the reduction in MCL and cost of providing credit support for market participants that could result from the proposed Rule. The costs of the proposed Rule include the direct costs associated with implementation of the proposed Rule and the implicit costs associated with the increased risk of a payment shortfall under the proposed Rule.

In considering these costs and benefits, the Commission has also considered Promontory's analysis of AEMO's MCL and POE models.

### 7.1 AEMO's view

In the rule change proposal, AEMO estimated that removing the restriction on offsetting in clause 3.3.8(e) results in a reduction in MCL across the NEM of \$12 million and a saving in the cost of providing credit support for market participants of \$200,000-\$500,000 per annum (based on Summer 2014 data).<sup>125</sup>

In modelling provided to the AEMC to support its submission to the consultation paper, AEMO revised these estimates to:

- MCL reduction of \$62 million across the NEM; and
- a saving in the cost of providing credit support of \$0.92-\$2.4 million per annum (across the NEM).

AEMO also noted the proposed Rule would encourage the efficient operation of the prudential framework, through the efficient use of market participant collateral. AEMO argue that this efficiency gain could be achieved while maintaining the prudential standard.<sup>126</sup>

In the rule change proposal, AEMO argued 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 consumers will be determined by each market participant."<sup>127</sup>

In the rule change proposal, AEMO identified implementation costs of \$100,000 and also notes that no impact on market participants' systems or processes is expected as a result of the rule change proposal.

However, in its submission to the AEMC's consultation paper, AEMO outlined three options for minimising the prudential risks associated with the proposed Rule. In particular, AEMO noted that the costs imposed on market participants may vary by the type of option and the type of market participant. For example, under option 2, when faced with a need to provide extra credit support, small retailers and generators may find it more costly to provide this extra credit support in such a short time (one business

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<sup>125</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 16.

<sup>126</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 22.

<sup>127</sup> AEMO, Electricity Rule Change Proposal, Offsets in the Prudential Margin, 28 May 2015, p. 20.

day) compared to larger market participants (such as gentailers). Under option 3, which relates to extending the ex-ante reallocation timetable to 14 days, the small proportion of market participants that choose to register reallocations on a weekly basis will be required to register reallocations 14 days ahead.<sup>128</sup>

## **7.2 Stakeholder views**

### **7.2.1 First round of consultation**

In submissions, stakeholders supported the rule change proposal, with most noting that AEMO's estimates of the financial benefits (or cost savings) of the proposed rule were underestimated.<sup>129</sup>

Further, stakeholders considered that consumers would benefit from reduced costs being placed on electricity retailers and generators with these savings passed through in electricity prices.

### **7.2.2 Second round of consultation**

One submission to the Draft Determination directly addressed the costs and benefits of the rule change. The AEC stated that they expect that the implementation of the rule change will provide a benefit to consumers that will markedly exceed the cost of implementation.<sup>130</sup>

## **7.3 Analysis**

### **7.3.1 Costs**

The potential costs associated with the final Rule fall into two broad categories, the direct costs of implementation and the indirect, post-default costs. The direct costs relate to the systems changes by AEMO and/or market participants to give effect to the final Rule. The indirect costs relate to the increased risk of payment shortfalls (or post-default costs) and the associated impact on market prices, in the event of a market participant's default, as a result of the reduction in credit support levels in the NEM.

AEMO have indicated that the systems changes that would be necessary to give effect to the proposed Rule would cost \$100,000. AEMO have stated that this cost would be incurred prior to implementation of the final Rule and would not represent an ongoing cost.

AEMO stated in the rule change proposal that they do not expect that any market participants would have to make any systems changes as a result of the proposed Rule. This finding is supported by the fact that stakeholders did not raise the issue of potential higher costs to them, as a result of the proposed Rule in their submissions to the AEMC's consultation paper or Draft Determination.

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<sup>128</sup> AEMO, Submission to Consultation Paper, 17 February 2016 p3-5.

<sup>129</sup> AEC, Submission to Consultation Paper, 4 February 2016; CS Energy, Submission to Consultation Paper, 4 February 2016; ERM Power, Submission to Consultation Paper, 1 February 2016.

<sup>130</sup> AEC, Submission to the Draft Determination, 11 August 2016.

However, in its submission to the AEMC’s consultation paper, AEMO outlined a number of systems and/or process changes that may be necessary to manage the prudential risks associated with the proposed Rule.<sup>131</sup> As discussed in Section 7.1, these changes may result in some costs for market participants, including costs associated with systems changes. The size of these costs will partly depend on the option chosen by AEMO.<sup>132</sup>

The final Rule is expected to lead to a reduction in the level of credit support held by market participants in the NEM. This reduction in credit support levels may increase the risk of payment shortfalls following a market participant's default. Promontory noted in their report that the proposed Rule “has the potential to create post-default impacts (and subsequent flow-on effects to market participants) that would be higher than if the rule change were not implemented”.<sup>133</sup>

However, Promontory noted that these post-default costs are difficult to estimate because, historically, there have been no payment shortfalls in the NEM and the pooled nature of the NEM means that payment shortfalls would be spread across market participants.

Promontory validated AEMO’s modelling approach with respect to the prudential POE estimates per region under the current and proposed Rules.<sup>134</sup> These results are summarised in Table 7.1 below.

**Table 7.1 Prudential POE estimates, current and proposed Rules**

Region	Current Rules	Proposed Rule
NSW	1.73%	1.76%
QLD	1.85%	1.87%
SA	1.80%	1.88%
TAS	2.24%	2.27%
VIC	1.73%	1.75%

Promontory consider that while the proposed Rule increases the probability of exceedance in the NEM, this increase is not material, with the prudential POE for all regions, excluding Tasmania, remaining consistent with the prudential standard.<sup>135</sup>

<sup>131</sup> AEMO, Submission to Consultation Paper, 17 February 2016, pp 3-5.

<sup>132</sup> See Section 4.1.2 for more detail on the options put forward by AEMO

<sup>133</sup> Promontory Australasia, Offsets in the Prudential Margin Economic Analysis, report prepared for the AEMC, 3 June 2016, p28.

<sup>134</sup> The proposed Rule calculation incorporates the reduction in MCL requirements as a result of the proposed Rule between December 2013 and November 2015.

<sup>135</sup> Promontory Australasia, Offsets in the Prudential Margin Economic Analysis, report prepared for the AEMC, 3 June 2016, p32.

This finding would suggest that potential post-default costs as a result of the proposed Rule are small.

The findings given above in Table 7.1 are based on the proposed Rule and not the final Rule. The final Rule requires AEMO to amend certain of its procedures to take into account the final Rule. Promontory note that post-default impacts can be lessened by AEMO making appropriate improvements to its Procedures. Promontory's report recommends:<sup>136</sup>

- implementing appropriate enhancements to AEMO's existing processes and systems to confirm that offsets are firm;
- providing greater clarity about how AEMO will exercise its discretion; and
- redeveloping the POE model to use market participant level data.<sup>137</sup>

The Commission considers it appropriate that AEMO revise its CLP, reallocation procedures and reallocation timetable, as required, to take into account the changes to clause 3.3.8 of the NER prior to such changes commencing. In addition, the Commission considers that AEMO is best placed to determine effective ways of managing any increase in prudential risk associated with the final Rule through changes to the CLP, reallocation procedures and reallocation timetable, as required. For these reasons, the final Rule requires AEMO to revise these procedures.

### **7.3.2 Benefits**

In order for the NEM to operate in an efficient manner the costs imposed on market participants as a result of their obligations to supply AEMO with credit support should be reflective of the financial risk they pose to the NEM. The Commission considers that the final Rule would confer benefits in the form of decreased MCL requirements and associated costs whilst maintaining an acceptable level of prudential risk, as governed by the prudential standard.

The final Rule has the potential to reduce the MCL for market participants and therefore reduce the costs faced by market participants. The discussion of estimated benefits resulting from the final Rule is informed by Promontory's analysis and validation of AEMO's MCL model.

Promontory estimated that the proposed Rule would result in a reduction in MCL requirements of \$62 million and \$45 million in summer 2014 and summer 2015 respectively.<sup>138</sup> This is considerably more than the cost savings that were included in AEMO's rule change request.

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<sup>136</sup> Promontory Australasia, Offsets in the Prudential Margin Economic Analysis, report prepared for the AEMC, 3 June 2016, p33.

<sup>137</sup> It is noted that this recommended improvement would involve some data challenges and it is recognised that redevelopment of the POE model may extend beyond the implementation of the final Rule.

<sup>138</sup> Promontory Australasia, Offsets in the Prudential Margin Economic Analysis, report prepared for the AEMC, 3 June 2016, p28.

The reduction in MCL requirements will lead to reduced costs of providing credit support, which is estimated to be between \$0.92 and \$2.46 million per annum for summer 2014.<sup>139</sup> These cost savings could be passed on to consumers in the form of lower prices.

The analysis of the benefits of the proposed Rule provides an indication of the quantum of MCL reduction and costs savings associated with the final Rule. The Commission acknowledges that the actual benefits may differ from the estimated benefits for a number of reasons, including:

- estimates assume full offsetting –the final Rule gives AEMO discretion to determine the extent of offsetting between reallocation amounts and trading amounts. This is consistent with the approach in the proposed Rule. To the extent that partial, rather than full, offsetting was to occur in practice, this would reduce the reduction in MCL amounts;
- estimates ignore potential second-round effects on the prudential margin calculation – if full offsetting is allowed in the calculation of the prudential margin, and this offsetting could, all else equal, lead to a breach of the prudential standard, then AEMO may, in effect, reduce the extent of offsetting by changing various parameters (such as the volatility factor) in their modelling, to ensure the prudential standard continues to be met. This may lower the reduction in MCLs for market participants, and reduce the size of the estimated cost savings; and
- following on from the previous point, as some of the parameters (such as the Participant Risk Adjustment Factor) in AEMO’s POE model may not sufficiently differentiate between market participants, any reduction in the extent of offsetting may be equally applied to all market participants, rather than varying the reduction on the basis of a market participant’s risk profile. The allocation benefits accruing to a market participant, as a result of the final Rule, should be based on their risk profile.

On balance, the Commission considers that the final Rule would support cost savings for market participants with respect to their credit support obligations, whilst maintaining the prudential standard. These potential cost savings could enhance the efficiency of the NEM’s prudential framework.

## 7.4 Conclusions

The Commission is satisfied that the final Rule will, or is likely to, contribute to the achievement of the NEO, for the following reasons:

- the costs associated with changes under the final Rule are relatively small and relate to a once-off change to AEMO and/or market participants’ systems. Once

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<sup>139</sup> Promontory Australasia, *Offsets in the Prudential Margin Economic Analysis*, report prepared for the AEMC, 3 June 2016, p28. The estimated cost saving for summer 2015 is between \$720,000 and \$1.92 million per annum, depending on the cost of credit support (assumed to be between 1.5 and 4 per cent, per annum).

the final Rule is implemented, it is not expected to impose much ongoing costs on AEMO or market participants;<sup>140</sup>

- the benefits of the final Rule, in terms of cost savings, far outweigh the costs. The potential cost savings as a result of the change to the prudential margin calculation would accrue to market participants on an ongoing basis;
- the final Rule would support an improvement to the productive efficiency of the NEM by allowing for a reduction in MCL requirements while maintaining the prudential standard. Market participants would be able to use the cost savings to fund more productive investment;
- the final Rule would support an improvement of the allocative efficiency of the NEM by allowing credit support requirements to more accurately reflect the risks posed by a market participant to the NEM; and
- the final Rule supports efficient costs savings for market participants, which could be passed on to consumers.

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<sup>140</sup> As stated, the extent to which the final rule would impose costs on market participants depends on the procedural changes adopted by AEMO. The option chosen may have implication for the systems costs of market participants and/or costs of financing.

## Abbreviations

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
CLP	Credit Limit Procedures
Commission	See AEMC
MCL	Maximum Credit Limit
NEL	National Electricity Law
NEM	National Electricity Market
NEO	National Electricity Objective
NER	National Electricity Rules
OSL	Outstandings Limit
POE	Probability of Exceedance
PM	Prudential Margin
RRP	Regional Reference Price
Rules	See NER
TL	Trading Limit

## A Summary of issues raised in submissions

### A.1 First round of submissions

Stakeholder	Issue	AEMC Response
<b>Restricting trading and reallocation amount offsets</b>		
ERM Power, p. 1.	ERM Power strongly supports the proposed change to the Rules to enable trading and reallocation amounts to be offset in the prudential margin calculation.	The Commission has determined to make a final Rule removing the prohibition on offsetting reallocation and trading amounts in the prudential margin calculation. The removal of the prohibition would commence on 20 October 2017. This is discussed in Chapter 3.
CS Energy, p. 1.	CS Energy considers there is no clear reason for maintaining the current restriction in the Rules.	See the previous response.
Australian Energy Council (AEC) (formerly Competitive Energy Association), Attachment 1, p. 1.	AEC considers there is no clear reasoning for maintaining the current restriction in the Rules. AEC considers that reallocations are firm through the reaction period and should be used as an offset to trading amounts in the prudential margin.	See the previous response.
GDF Suez Australian Energy (GDF SAE), p. 2.	GDFSAE considers that the restriction imposed by clause 3.3.8(e) no longer has any clear reasoning and should be removed from the NER.	See the previous response.
<b>Impact of the proposed rule on market efficiency</b>		
ERM Power, p. 3.	ERM Power considers the rule change proposal will lead to cost savings for the organisation, with negligible implementation costs.  ERM Power considers the savings associated with the rule change proposal understate the total	The Commission notes that the final Rule will support a reduction in MCL requirements for market participants by \$62 million across the NEM. This reduction should result in credit support cost savings for market participants of \$920,000 - \$2.4 million per annum.  The Commission notes that these estimates are higher than the original



Stakeholder	Issue	AEMC Response
	savings across all market participants.	estimates put forward by AEMO in its rule change proposal. This is discussed in Chapters 5 and 7.
AEMO, p. 1.	AEMO considers that if offsets were allowed as proposed by the rule change, there would be material reductions in credit support levels required from participants.	See the previous response.
AEC, Attachment 1, p. 1.	AEC considers the proposed rule would be allocatively efficient as the current arrangements require collateral to be provided in the prudential margin as if a market participant is not hedged. AEC members consider the savings associated with the rule change request understate the benefits (as the MCL values used in the modelling understate the actual MCL required). AEC considers that the prudential standard will be maintained under the proposed rule.	See the previous response.
CS Energy, p. 1.	<p>CS Energy considers the rule will result in cost savings to market participants, but that AEMO's modelling understate the total benefit.</p> <p>CS Energy does not consider that holding excess collateral for those participants that have hedged their position assists in maintaining the Prudential Standard.</p>	See the previous response.
GDFSAAE, p. 2.	GDFSAAE considers that removing clause 3.3.8(e) will reduce the guarantee amount that participants must provide to AEMO. GDFSAAE considers the reduction in financial burden on market participants will lead to an overall improvement in market efficiency.	See the previous response.

Stakeholder	Issue	AEMC Response
<b>Effective risk management: appropriate allocation of risks</b>		
<p>AEMO, p. 1-5.</p>	<p>AEMO considers that if offsets were allowed as proposed by the rule change, there would be material reductions in credit support levels required from participants. AEMO considers the efficiency gain is possible without breaching the 2% Probability of Exceedance (POE) target set as the current prudential standard for the NEM.</p> <p>AEMO nevertheless notes that the modelling used to demonstrate that the prudential standard would be met for all regions under the proposed rule does not consider the impact of reallocations in the MCL calculations, as debit and credit reallocations are expected to net out within the region.</p> <p>In its submission, AEMO has identified significant operational and procedural changes, not previously identified, that may be required to ensure the prudential standard would not be breached, if the proposed rule were made.</p> <p>AEMO considers there are four options to manage this risk:</p> <ul style="list-style-type: none"> <li>• Option 1: No change to the existing Rule;</li> <li>• Option 2: reallocation alerts - AEMO is implementing a daily 7 business day ahead reallocation alert to monitor and review the reallocation amounts in each market participant's MCL calculation, relative to the actual reallocation requests registered with AEMO. This option would require market participants to respond to requests for additional</li> </ul>	<p>On balance, the Commission considers that the proposed Rule does not pose a material risk to the NEM or significantly increase the risk of market participant default and has determined to make a final Rule that removes the prohibition on offsetting between trading and reallocation amounts in the prudential margin calculation. Given that a market participant's reallocation and trading offsets could result in a negative prudential margin, the Commission has determined to include in the final Rule provision that the prudential margin cannot be negative to further mitigate any prudential risks arising from the removal of existing clause 3.3.8(e). Whilst AEMO cannot determine a prudential margin that is a negative amount under the final Rule, AEMO will have the discretion to determine what non-negative amount the prudential margin should be in accordance with the credit limit procedures and in order to meet the prudential standard. Nevertheless, the Commission notes Promontory's observations in relation to the POE model.</p> <p>The Commission also notes that the final Rule may also allow for the inclusion of non-firm offsets in the prudential margin calculation. The Commission considers that this risk can be appropriately managed by AEMO through changes to its systems and procedures. The Commission notes the options put forward by AEMO and considers there may be other options available to AEMO to manage this risk and encourages stakeholders to engage in the consultation process for amending the procedures to reflect the final Rule.</p> <p>The final Rule includes a transitional Rule requiring AEMO to make changes to its CLP, reallocation procedures and reallocation timetable, as required, by 1 July 2017. Changes to clause 3.3.8(e) under the draft Rule would commence on 20 October 2017, allowing AEMO sufficient time to make the necessary adjustments to its internal systems and processes. This is discussed in Chapter 4.</p>

Stakeholder	Issue	AEMC Response
	<p>credit support within 24hrs, in contrast to the current practice of 7 days;</p> <ul style="list-style-type: none"> <li>• Option 3: changes to the ex-ante reallocation timetable from 7 to 14 business days; and</li> <li>• Option 4: partial reallocation offsets.</li> </ul> <p>Options 2 to 4 would require amendments to AEMO procedures and may take up to 6 months to consult on and implement.</p>	
ERM Power, p. 3.	<p>ERM Power considers there are adequate processes to determine the firmness of reallocations.</p> <p>ERM Power supports AEMO's existing right to deregister reallocations in the case of a default event, as it is an important process to ensure AEMO can mitigate market exposure.</p> <p>There has been no history of large generator default and therefore processes are appropriate in the context of a low-likelihood (though high impact) risk.</p>	See the previous response.
AEC, Attachment 1, p. 1.	<p>AEC considers there are adequate processes to determine the firmness of reallocations.</p> <p>AEC notes AEMO's rule change proposal states that ex-ante reallocations will stand during the Reaction Period; that reallocations cannot be unilaterally terminated; and that AEMO can refuse a reallocation termination or reapplication request, if it has grounds to believe the request will expose NEM creditors.</p>	See the previous response.

Stakeholder	Issue	AEMC Response
	<p>The AEC considers AEMO can revise the CLP should it consider the calculation of debits (load) and credits (generation) does not reflect the credit risk of the hedging instrument used by the market participant.</p>	
<p>CS Energy, p. 1.</p>	<p>CS Energy considers AEMO's processes are adequate to determine the firmness of offsets from reallocations and/or generation. CS Energy understands that AEMO has triggers in place to instigate a MCL review in the event it has concerns about reallocations or generation levels.</p> <p>Further, CS Energy has investigated the firmness of reallocations during the reaction period and considers it will survive the default of one party, such that NEM creditors are not exposed to reallocation amounts.</p> <p>CS Energy considers AEMO has adequate powers to deregister a reallocation and reject a reallocation termination request.</p>	<p>See the previous response.</p>
<p><b>Trade-off between regulatory certainty and flexibility</b></p>		
<p>ERM Power, pp. 3-4.</p>	<p>ERM Power considers that there is benefit in improving the transparency of AEMO's decision-making process with regards to the existing discretion in calculating the OSL and prudential margin. This could be done in the Rules or in the Credit Limit Procedures.</p>	<p>The Commission considers that there should be an appropriate balance between providing certainty to market participants, in relation to the treatment of reallocation and generation offsets in the prudential margin calculation, and the need for AEMO to retain some flexibility and discretion in relation to developing the methodology to determine the prudential settings.</p>

Stakeholder	Issue	AEMC Response
	<p>AEMO's discretion in decision making with regards to these calculations leads to uncertainty for market participants and can impact the market participant's ability to forecast its forward position, which in turn, reduces the efficiency of its operations.</p> <p>ERM Power considers there would be no detriment in including a clause in the Rules to explicitly outline AEMO's right to offset reallocation and trading amounts in the prudential margin calculation.</p>	<p>AEMO's proposed Rule does not oblige AEMO to provide guidance (in addition to what is already provided for under the existing Rules) on how it may apply its discretion in terms of the extent of offsetting between reallocation amounts and trading amounts.</p> <p>The Commission considers that the requirements in clauses 3.3.8(c), (f) and (g) are sufficient in curbing AEMO's discretion and providing transparency in the methodology they use to determine the prudential settings. The Commission also considers that AEMO must update the CLP, reallocation procedures and reallocation timetable, as required, in accordance with the Rules consultation procedures, to take into account the final Rule. This should be done by 1 July to ensure sufficient time is provided to market participants to consult with AEMO on the methodology in the CLP and ensure market participants have time to implement relevant internal processes before changes to clause 3.3.8(e) are effective.</p> <p>This requirement on AEMO is imposed under transitional Rules, which form part of the final Rule, and would serve to provide sufficient regulatory certainty in respect of the changes to clause 3.3.8 under the final Rule. Furthermore, AEMO's discretion in determining the prudential settings, including determining the extent of offsetting, is limited by the prudential standard (clause 3.3.4A).</p> <p>The Commission considers that the final Rule, together with the existing Rules and AEMO's CLP, provide an appropriate degree of regulatory certainty to Market Participants about the manner in which the prudential settings are determined. This is discussed in Chapter 6.</p>
AEC, Attachment 1, p. 2.	<p>AEC considers concerns raised over AEMO's discretion in the treatment of prospective reallocations when calculating the prudential margin to be unwarranted.</p> <p>AEC considers AEMO has enough discretion in the offsetting of trading amounts and reallocations in the OSL and prudential margin. AEC further</p>	<p>The Commission's final Rule obliges AEMO (through a transitional Rule) to update the CLP, reallocation procedures and reallocation timetable, as required, by 1 July 2017 in accordance with the Rules consultation procedures to take into account the final Rule provides market participants with sufficient time to consult on the methodology used to determine the prudential margin implement changes (if any) to internal processes before the changes to clause 3.3.8 become effective. The Rules consultation procedure will provide an opportunity for AEMO and market participants to</p>

Stakeholder	Issue	AEMC Response
	considers AEMO can revise the CLP should it consider the prudential margin calculation does not reflect the credit risk associated with the type of hedging used by the market participant.	consult on the ways in which the CLP, reallocation procedures and reallocation timetable, may need to be amended to reflect the changes under the final Rule.
CS Energy, p. 1.	<p>CS Energy considers that concerns raised over AEMO's discretion in relation to prospective reallocations when calculating the prudential margin to be unfounded. AEMO is required to use its discretion when determining the MCL in accordance with the CLP.</p> <p>CS Energy does not consider there is a need for the Rules to prescribe that AEMO must allow for offsets of trading and reallocation amounts in the prudential margin calculation.</p>	Noted. See the previous response.
GDFSAE, p. 2.	<p>GDFSAE considers that regulatory certainty is important in establishing the prudential framework for the NEM. GDFSAE further considers that the NER should make clear AEMO's methodology for determining prudential settings, including the offsetting arrangements between prospective reallocations and trading amounts.</p> <p>GDFSAE considers that without this requirement in the NER AEMO would have discretion over the extent to which it takes account of reallocations in the prudential margin calculation, which would result in regulatory uncertainty for participants, and less efficient outcomes.</p>	See the previous response.
AEMO, p. 5-6.	AEMO notes that implementation of options 2- 4, will require changes to the Credit Limit Procedures,	The Commission's final Rule obliges AEMO (through a transitional Rule) to update the CLP, reallocation procedures and reallocation timetable, as required, by 1 July 2017 in accordance with the Rules consultation

Stakeholder	Issue	AEMC Response
	<p>which will require stakeholder consultation.</p> <p>AEMO notes that the implementation of option 4 (partial offsets) would require changes to the procedures to address regulatory certainty for market participants.</p>	<p>procedures to take into account the final Rule to provide market participants with sufficient time to consult on the methodology used to determine the prudential margin and implement changes (if any) to internal processes before the changes to clause 3.3.8 become effective. The Rules consultation procedure will provide an opportunity for AEMO and market participants to consult on the ways in which the CLP, reallocation procedures and reallocation timetable may need to be amended to reflect the changes under the final Rule.</p>
<b>Competition and Barriers to Entry</b>		
ERM Power, p. 4.	<p>ERM Power considers that the proposed rule change would improve competitive neutrality between independent and vertically integrated market participants. This, in turn, would support the entry and expansion of difference business models, encouraging a more robust competitive environment.</p> <p>The rule change will also reduce the barriers to entry, as entrants' collateral requirements will be more efficient.</p>	<p>The Commission considers that the final rule is likely to reduce barriers to entry. The removal of the prohibition on offsetting between trading and reallocation amounts in the prudential margin calculation would support a reduction in MCL requirements without breaching the prudential standard and therefore represents an efficient cost saving for market participants. Further, as new entrants to the market or smaller market participants face relatively higher costs for obtaining credit than larger vertically integrated competitors. A reduction in MCL requirements would therefore reduce barriers to entry or expansion for such market participants.</p> <p>However, the Commission considers that there is limited evidence to support AEMO's assertion that the removal of the prohibition on offsetting between trading and reallocation amounts would reduce the advantage enjoyed by gentailers relative to standalone retailers or standalone generators, with respect to credit support requirements. This is discussed in Chapter 5.</p>
Competitive Energy Association, Attachment 1, p. 2.	CEA considers that the Rules and CLP should require sufficient collateral to cover the risk of default, however where possible collateral should be minimised to reflect these hedging arrangements. The current rule requires excess collateral for those market participants with effective	The removal of the prohibition on offsetting between trading and reallocation amounts in the prudential margin calculation would support a reduction in MCL requirements without breaching the prudential standard and therefore represents an efficient cost saving for market participants. This is discussed in Chapter 5.

Stakeholder	Issue	AEMC Response
	<p>hedging arrangements.</p> <p>As such, CEA supports the rule change proposal as it should reduce capital requirements for participants using OTC derivatives and reallocations. CEA supports the minimisation of overheads, in order to allow competition to flourish.</p>	
CS Energy, p. 2.	<p>CS Energy considers the Rules and CLP should require an efficient level of collateral to be provided for each market participants, depending on the way they have hedged their exposure to pool prices. The current rules require excess collateral for a participant that has hedged using an OTC derivative or reallocation.</p>	See the previous response.
AEMO, p. 3.	<p>AEMO notes that implementation of option 2 (detailed above) could potentially compound the existing advantage conferred to the major Gentrailers, as smaller retailers and generators find it challenging to provide bank guarantees in 24 hours.</p>	<p>The final Rule includes a transitional Rule requiring AEMO to make changes to its CLP, reallocation procedures and reallocation timetable, as requires, by 1 July 2017. Changes to clause 3.3.8(e) under the draft Rule would commence on 20 October 2017, allowing AEMO sufficient time to make the necessary adjustments to its internal systems and processes. This is discussed in Chapter 4.</p>
<b>Costs and benefits of the rule change proposal</b>		
ERM Power, p. 4.	<p>ERM Power considers that improved capital efficiency will enable market participants to further invest in solutions to benefit consumers.</p> <p>ERM Power has identified no additional costs or benefits associated with the rule change proposal.</p>	<p>The Commission notes that the final Rule will support a reduction in MCL requirements for market participants by \$62 million across the NEM. This reduction should result in credit support cost savings for market participants of \$920,000 - \$2.4 million per annum</p> <p>The Commission notes that these estimates are higher than the original estimates put forward by AEMO in its rule change proposal. This is discussed in chapter 7.</p>



Stakeholder	Issue	AEMC Response
Competitive Energy Association, Attachment 1, p. 3.	CEA considers savings will be passed through to consumers in electricity prices, as costs are reduced for electricity retailers.	See the previous response.
CS Energy, p. 2.	CS Energy considers that consumers will benefit from reduced costs being placed on electricity retailers and generators with these savings being passed through in electricity prices.	See the previous response.
AEMO	AEMO considers that modelling of the proposed rule change on 2015 data suggests that a 6.5% reduction in MCL amounts is achievable.	See the previous response.

## A.2 Second round of submissions

Stakeholder	Issue	AEMC response
<b>Restricting trading and reallocation amount offsets</b>		
ERM Power, p. 1.	Strongly supports the amendment allowing AEMO to offset between trading and reallocation amounts when determining a market participant's prudential margin and therefore provide credit support relief by lowering the participant's Maximum Credit Limit.	The Commission has determined to make a final Rule removing the prohibition on offsetting reallocation and trading amounts in the prudential margin calculation. The removal of the prohibition would commence on 20 October 2017. This is discussed in Chapter 3
AEMO, p. 1.	AEMO is supportive of the draft Rule as published.	See the previous response.
<b>Impact of the rule on market efficiency</b>		
ERM Power, p. 1.	The improvements in capital efficiency and the strengthening of competition are likely to benefit consumers and place participants in a better position to invest in future energy solutions.	The Commission notes that the final Rule will support a reduction in MCL requirements for market participants by \$62 million across the NEM. This reduction should result in credit support cost savings for market participants of \$920,000 - \$2.4 million per annum.
AEC, p. 1.	Agree that the amount of credit support needed to be provided by market participants is an inefficient use of collateral, and increases the cost of participating in the market for all counterparties.	See the previous response.
<b>Effective risk management: appropriate allocation of risks</b>		
ERM Power, p. 2.	ERM acknowledge that the options provided by AEMO are likely to be subject to further consultation under a relevant AEMO procedure amendment. However, ERM indicate a preference for Option 2 (providing credit support within 24 hours). This option has the advantage of alleviating the identified risk	In its submission to the consultation paper, AEMO has put forward three options designed to mitigate the prudential risk associated with the proposed Rule. These options require amendments to the CLP, and possibly also the reallocation procedures and reallocation timetable. The Commission considers there may be other options available to AEMO to manage this risk and encourages stakeholders to engage in the

Stakeholder	Issue	AEMC response
	<p>while maintaining opportunities for shorter qualifying ex ante reallocations. Option 3 (moving to a 14 day ex ante reallocation timetable) is considered to be feasible but inferior to option 2. Option 3 may diminish the choice of reallocation products available and flexibility to participants for using reallocations as a risk management tool.</p>	<p>consultation process for amending AEMO's procedures to take into account the final Rule.</p> <p>The final Rule includes a transitional rule requiring AEMO to update its CLP and reallocation procedures, as required, by 1 July 2017 to take into account the final Rule. Time has been allowed in order for AEMO to update its internal systems to reflect the changes to the NER and its procedures, with the removal of the current clause 3.3.8(e) taking effect from 20 October 2017. This time has also been provided to allow market participants to make any necessary changes to their systems or processes.</p>
<p>AEC, p. 2.</p>	<p>Supports Option 3, as put forward in AEMO's submission. Support for this option is predicated on the understanding that AEMO also shifts its timetable for the release of the initial MCL accordingly. This will ensure that participants still have the same number of days from the date of the initial MCL to finalise their reallocations. The AEC note that Option 3 does reduce the choice of reallocation products available and therefore the flexibility available to market participants to use reallocations as a risk management tool.</p>	<p>See the previous response.</p>
<p>AEC, p. 2.</p>	<p>AEC note that Option 2 will enable participants to maximise the efficiency gains of reallocation, and may be a strong option. However, the Energy Council acknowledges that the timetable which requires the provision of additional credit support within one business day may be difficult for smaller market participants to meet.</p> <p>Option 4, to provide partial offsets, is considered to provide limited risk reduction.</p>	<p>See the previous response.</p>

Stakeholder	Issue	AEMC response
<b>Trade-off between regulatory certainty and flexibility</b>		
AEMO, p. 1.	<p>AEMO intends to consult on a proposal to replace the reallocation timetable, which is currently embedded within the reallocation procedures, with a standalone timetable under clause 3.15.11(d). Consultation is expected to commence in August 2016 as part of the package of amendments associated with implementation of swap and option reallocations.</p> <p>If the reallocation timetable was published separately, the reallocation would not need to change as a result of the draft Rule. Suggest that the transitional provisions should require AEMO to amend and publish the 'reallocation timetable' under clause 3.15.11(d) of the NER, instead of amending the reallocation procedures. If the reallocation timetable remains within the procedures after AEMO's upcoming consultation, the timetable change would still have to be effected by way of a procedure change.</p>	<p>The Commission considers that AEMO is best placed to determine effective ways of managing any increase in prudential risk associated with the proposed Rule through changes to the CLP, reallocation procedures and reallocation timetable, as required.</p> <p>The wording of the transitional arrangements under the final Rule take into account AEMO's discretion with regard to offsetting trading and reallocation mounts by clarifying that the CLP, reallocation procedures and reallocation timetable must be amended, "as required", to give effect to the final Rule.</p>
AEMO, p. 1,2.	<p>AEMO's objective is to take offsetting of trading and reallocation amounts into account in the MCL reviews that take effect for summer 2017/18. The summer season commences on 1 December. For this to be achieved, AEMO will need to rely on the Rules as amended when determining a market participant's prudential setting in advance of 1 December 2017, in accordance with the amended credit limit procedures and AEMO's normal processes. If the substantive provisions of the new Rule do not come into effect before that date, AEMO would not have the necessary authority to do this.</p> <p>The Rule gives AEMO the flexibility (rather than the</p>	<p>The Commission notes AEMO's intention that offsetting of trading and reallocation amounts would be considered in the MCL reviews for the summer 2017/18 season, which commences on 1 December 2017.</p> <p>The final Rule includes a transitional Rule requiring AEMO to make changes to its CLP, reallocation procedures and reallocation timetable, as required, by 1 July 2017. Changes to clause 3.3.8(e) under the draft Rule would commence on 20 October 2017, allowing AEMO and market participants sufficient time to make the necessary adjustments to internal systems and processes. This is discussed in Chapter 4.</p> <p>The final Rule becomes effective on 20 October 2017. This allows AEMO with sufficient time to allow for offsetting of trading and reallocation amounts when conducting market participants' MCL reviews for the</p>

Stakeholder	Issue	AEMC response
	obligation) to take positive trading and reallocation amounts into account, we suggest that both schedules of the Rule could commence on the same date a short time after the Rule is made, as the Commission considers appropriate. The transitional rules could then indicate that the credit limit procedures and reallocation timetable (to be revised by 1 July 2017) must have an implementation date that requires AEMO to apply the amended methodology in determining prudential settings applicable to the summer season commencing on or around 1 December 2017. This should clarify that AEMO is not required to consider exercising its discretion in respect of those amounts before the summer 2017/18 review.	summer 2017/18 season (should AEMO permit such offsetting). This is discussed in chapter 6.
<b>Competition and barriers to entry</b>		
ERM Power, p. 1.	Agree that the rule allows collateral to be used more efficiently, easing barriers to entry for prospective retailers while still maintaining the prudential standard.	The Commission notes that the final Rule will support a reduction in MCL requirements for market participants by \$62 million across the NEM. This reduction should result in credit support cost savings for market participants of \$920,000 - \$2.4 million per annum.
ERM Power, p. 1.	The rule removes the competitive disadvantage currently held by vertically-integrated market participants and allows a more level basis for competition, with stand-alone market participants also extended the opportunity to use their hedging position to minimise the prudential margin.	The Commission considers that the argument that the proposed Rule would reduce the advantage currently enjoyed by vertically-integrated market participants has limited merit.
<b>Costs and benefits of the rule change proposal</b>		
AEC, p. 1.	AEC expects that the implementation of the rule change will provide a benefit to consumers which will	The Commission agrees that the expected benefits of the final Rule are likely to outweigh any associated costs.

<b>Stakeholder</b>	<b>Issue</b>	<b>AEMC response</b>
	markedly exceed the cost of implementation.	

## **B Legal requirements under the NEL**

This appendix sets out the relevant legal requirements under the NEL for the AEMC to make this final Rule determination.

### **B.1 Final rule determination**

In accordance with sections 102 and 103 of the NEL the Commission has made this final Rule and associated final rule determination in relation to the rule proposed by AEMO.

The Commission's reasons for making this final rule determination are set out in section 3.3.

A copy of the final Rule is attached to and published with this final rule determination. Its key features are set out in section 3.3.

### **B.2 Power to make the rule**

The Commission is satisfied that the final Rule falls within the subject matter about which the Commission may make rules. The final rule falls within the matters set out in section 34 of the NEL as it relates to the operation of the national electricity market (section 34(1)(a)(i)) and "the activities of persons (including Registered Participants) participating in the national electricity market" (section 34(1)(a)(iii)).

### **B.3 Power to make a more preferable rule**

Under section 91A of the NEL, the Commission may make a rule that is different (including materially different) from a market initiated proposed rule if the Commission is satisfied that, having regard to the issue or issues that were raised by the market initiated proposed rule (to which the more preferable rule relates), the more preferable rule will, or is likely to, better contribute to the achievement of the NEO.

As discussed in Chapter 3, the Commission has determined to make a final Rule, which is a more preferable Rule. The reasons for the Commission's decision are set out in section 3.3.

### **B.4 Commission's considerations**

In assessing the rule change request the Commission considered:

- the Commission's powers under the NEL to make the rule;
- the rule change request;
- the fact that there is no relevant Ministerial Council on Energy (MCE) Statement of Policy Principles;<sup>141</sup>

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<sup>141</sup> Under section 33 of the NEL the AEMC must have regard to any relevant MCE statement of policy principles in making a rule. The MCE is referenced in the AEMC's governing legislation and is a legally enduring body comprising the Federal, State and Territory Ministers responsible for Energy.

- submissions received during first and second round of consultation; and
- the Commission's analysis as to the ways in which the proposed rule will or is likely to, contribute to the achievement of the NEO.

The Commission may only make a rule that has effect with respect to an adoptive jurisdiction if satisfied that the proposed rule is compatible with the proper performance of (AEMO)'s declared network functions.<sup>142</sup> The final Rule is compatible with AEMO's declared network functions as it does not impact AEMO's performance of its declared network functions.

## **B.5 Civil penalties and conduct provisions**

The final Rule does not amend any clauses that are currently classified as civil penalty or conduct provisions under the NEL or National Electricity (South Australia) Regulations. The Commission does not propose to recommend to the COAG Energy Council that any of the proposed amendments made by the final Rule be classified as civil penalty or conduct provision.

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On 1 July 2011 the MCE was amalgamated with the Ministerial Council on Mineral and Petroleum Resources. The amalgamated Council is now called the COAG Energy Council.

<sup>142</sup> See section 91(8) of the NEL.