



# **For consultation - Draft Interim Qualifying Contracts and Firmness Guideline**

## **Retailer Reliability Obligation**

May 2019

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# 1 Public Consultation

At the 26 October 2018 COAG Energy Council meeting, Ministers agreed that the Energy Security Board (ESB) will progress development of draft National Electricity Law (NEL) amendments that would give effect to a Retailer Reliability Obligation (RRO).

The ESB was tasked to develop the National Electricity Rules (NER) necessary to implement the RRO. The draft Rules were published for stakeholder consultation on 8 March 2019. The final Rules are proposed to commence on 1 July 2019.

As set out in the Rules, the Australian Energy Regulator (AER) is responsible for developing a number of Guidelines on certain aspects of the RRO. Due to timing constraints the Rules specify that the AER will develop a number of interim guidelines which will be in place for one to two years. During this time the AER will run a full consultation process to develop final guidelines.

The AER's guidelines consultation process is set out in Table 1.1 below.

**Table 1.1 Guideline consultation process**

	Consultation on interim	Final Interim	Final guideline
<b>Reliability Instrument Guideline</b>	April 2019	31 July 2019	31 July 2020
<b>Market Liquidity Obligation Guideline</b>	April/May 2019	31 August 2019	31 December 2020
<b>Contracts and Firmness Guideline</b>	May/June 2019	31 August 2019	31 December 2020
<b>Forecasting Best Practice Guideline</b>	May/June 2019	30 September 2019	30 November 2020
<b>Opt-in Guideline</b>	Late 2019/early 2020 TBC	No interim arrangements	30 June 2020
<b>Reliability Compliance Procedures and Guidelines</b>	Mid 2020	No interim arrangements	31 December 2020

## 1.1 Draft Interim Contracts and Firmness Guideline – consultation

The AER is seeking feedback on the Draft Contracts and Firmness Guideline. Due to the tight timeframes we request submissions to be provided by 19 June 2019.

Submissions can be sent to [RRO@aer.gov.au](mailto:RRO@aer.gov.au) with the following title in the email: For consultation - Draft Interim Contracts and Firmness Guideline. Submissions received will be made available on the AER's website ([www.aer.gov.au](http://www.aer.gov.au)).

We prefer that all submissions be publicly available to facilitate an informed and transparent consultative process. Submissions will be treated as public documents unless otherwise requested. Parties wishing to submit confidential information should:

- clearly identify the information that is the subject of the confidentiality claim;
- and provide a non-confidential version of the submission in a form suitable for publication.

We will place all non-confidential submissions on our website. For further information regarding our use and disclosure of information provided to us, see the ACCC/AER Information Policy (June 2014), which is available on our website.

The remainder of this document is the guideline we are consulting on, the section above is included to provide an overview of the RRO work program the AER will be consulting with stakeholders on.

## 1.2 Consultation questions

The AER welcomes stakeholder feedback in relation to the all areas covered in the draft interim contracts and firmness guideline. Stakeholder feedback is sought in particular on the issues set out below.

Questions:

1. The AER can classify qualifying contracts as either standard qualifying contracts or non-standard qualifying contracts. In this draft version of the interim guideline we have classified all contracts listed in Table 5.1 (page 28) as standard qualifying contracts. We have considered power purchase agreements (PPAs), demand response, internal hedges and interregional contracts as non-standard qualifying contracts. We are seeking your views on whether PPAs, internal hedges, interregional contracts, and demand response contracts should be classified as standard or non-standard contracts? Please give an explanation of your reasoning.
2. The AER considers contract firmness is the product of volume risk, price risk, and other contract limitations (such as non-price triggers and payout limits). Do you consider any other factors need to be considered in determining contract firmness? Is their further guidance the AER should provide in the final interim guideline?
3. The AER is aware of contracts between liable entities and their customers (energy supply agreements) that pass through spot price volatility risk to the customer. These contracts have not been addressed in the draft version of the interim guideline. The

AER is interested in stakeholder's views on how these contract fit into the qualifying contract framework.

4. Section 8 outlines the format of the NCP report. It specifies what information must be submitted and some examples of the format of this information. We plan to include a more detailed template for the NCP report when the final interim guideline is published in August. The AER is seeking feedback on what should be included in this template.
5. The AER is required to establish an Auditors Panel. To be appointed to the Auditors Panel the AER must determine that the person has sufficient experience and expertise in energy derivatives and energy contracts to carry out the functions of an Independent Auditor. The AER is seeking input on criteria which it will use to assess the suitability of an auditor.

## 2 Overview

This document is an interim guideline produced in accordance with National Electricity Rules (Rules) Rule 11.115.6(a) regarding contracts and firmness. A final guideline will be developed following the *Rules Consultation Procedures* by 31 December 2020.

*Liable entities* are required to enter into sufficient *qualifying contracts* by T-1 to meet their share of AEMO's *one-in-two year peak demand* forecast during a *reliability gap period*. *Liable entities* are required to provide their *net contract position*, assessed one year before the *reliability gap period*, to the AER by *reporting day*. When reporting to the AER, *liable entities* must adjust their contract position to reflect how effective they are at limiting exposure to volatility in the wholesale electricity spot price (firmness adjustment). This firmness adjustment must be carried out in accordance with the *firmness methodology* in this guideline.

This guideline is intended to assist *liable entities* to understand how the AER will exercise its functions in relation to *qualifying contracts* and the *net contract position* report (*NCP report*). This guideline sets out the general requirements under the Rules and does not constitute legal advice. Where a *liable entity* is unsure about specific aspects of the Rules and how they apply to certain situations they should obtain their own legal advice.

### 2.1 Purpose of this guideline

The AER aims to work with National Electricity Market (NEM) participants to maximise their compliance with their obligations under the national energy framework. The purpose of this guideline is to inform relevant participants of the *firmness methodologies* that are to be applied when assessing contracts for the *NCP report*.

The AER has developed *default firmness methodologies* for *standard qualifying contracts*. *Liable entities* may also manage their risk using *non-standard qualifying contracts*, for which specific *firmness methodologies* are difficult to define. A *bespoke firmness methodology* will be developed by *liable entities*, using broad principles set out in this guideline. *Bespoke firmness methodologies* developed by *liable entities* must be approved by an *Independent Auditor*, from an *Auditors Panel* approved by the AER.

If the Retailer Reliability Obligation is confirmed at T-1, the Rules require all *liable entities* in the relevant region to submit their *NCP reports* to the AER by the *reporting day*.

### 2.2 AER compliance audits

The AER must monitor compliance with the RRO.<sup>1</sup> Our Reliability Compliance Procedures and Guidelines, to be published on 31 December 2020, will outline how we propose to undertake our compliance activities for the RRO.

The AER intends to undertake spot audits of *NCP reports*, as permitted by section 18ZE of the NEL. This may include the following:

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<sup>1</sup> Section 18ZA of the NEL

- we may request that *liable entity* provide information that demonstrates that contracts reported in the *NCP report* were actually held by the *liable entity*. This may include providing *qualifying contracts* to the AER.
- we may seek information on how the *firmness factor* was determined for *standard qualifying contracts*. We may adjust the firmness factor where we considers the *liable entity* did not apply the *default firmness methodology* correctly.
- we may also seek information on how the *NCP report* was adjusted for the impact of *non-qualifying contracts* where we consider an adjustment may not have been appropriately applied.

We will endeavour to undertake our audit of *NCP reports* prior to giving AEMO a notification for procurer of last resort (PoLR) costs under clause 4A.F.9 of the NER. If we determine that the actual *net contract position* of a *liable entity* is different from the *NCP report*, we may adjust the *net contract position* for the purposes of clause 4A.F.9 of the NER. This revised *net contract position* would form the basis of our assessment of compliance for the purposes of section 14R(2) of the NEL.

The outcome of any audit may also form the basis of enforcement action for breach of the NEL or NER.

## 2.3 Roles and functions of the AER

The AER has a range of roles in the RRO process which are outlined in Part 2A of the NEL and 4A of the NER.

Our roles and functions for the RRO include:

- Creation of six guidelines including<sup>2</sup>:
  - Reliability Instrument Guideline
  - Market Liquidity Obligation Guideline
  - Contracts and Firmness Guideline
  - Forecasting Best Practice Guideline
  - Opt-in Guidelines
  - Reliability Compliance Procedures and Guidelines
- Decision to make or not make a *reliability instrument*
- Monitoring of the Market Liquidity Obligation
- Approval of *bespoke firmness methodologies*
- Decision to approve or reject an application to adjust a *net contract position*
- Large customer opt-in process and approval
- Compliance

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<sup>2</sup> Due to timing constraints the Reliability Instrument Guideline, MLO Guideline, Contracts and Firmness Guideline and Forecasting Best Practice Guideline will be developed as interim guidelines for operation in 2019 and 2020.

## 2.4 Definitions and interpretation

In this guideline the words and phrases presented in *italics* have the meaning given to them in the Rules.

## 2.5 Guideline prepared using draft Rules

This guideline has been prepared using the latest draft version of the Rules<sup>3</sup>. All references to the NER within this document relate to the latest draft rules. The RRO Rule Changes are subject to approval by the COAG Energy Council and the South Australian Energy Minister.

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<sup>3</sup> National Electricity Amendment (Retailer Reliability Obligation) Rule 2019,  
<http://www.coagenergycouncil.gov.au/publications/retailer-reliability-obligation-rules>, 7 May 2019.

### 3 Introduction of key concepts

The RRO is intended to ensure that early investment signals are sent to generators and investors of impending supply shortfalls, so that they have an incentive and time to invest in new generation to fill the predicted generation shortfall. The RRO achieves this objective by requiring that, if a *reliability gap period* is triggered, *liable entities* enter into sufficient *qualifying contracts* to cover their share of the *one-in-two year peak demand* forecast for the region and *reliability gap period*. A liable entity must submit a snapshot of their *net contract position* as of one year before the commencement of the *reliability gap period* (T-1) to the AER.

This is one of a number of guidelines being prepared by the AER and AEMO. AEMO's process for identifying a *reliability gap period* will be defined in its Reliability Forecast Guideline. The process for the AER making a *reliability instrument* is set out in our Reliability Instrument Guideline.<sup>4</sup>

#### 3.1 Liable entities

*Liable entities* are electricity retailers and large customers who elect to opt-in to the requirement. A *liable entity* is defined by clause 4A.D.2 of the NER. Clause 4A.D.2 states that:

A person is a *liable entity* for a region if:

- the person is registered as a *Market Customer* for a connection point in that region at the end of the *contract position day* but only to the extent there is no *opt-in customer* for that connection point at the end of the *contract position day*;
- the person is registered as a *large opt-in customer* for a connection point in that region at the end of the *contract position day*;
- the person is registered as a *prescribed opt-in customer* for a connection point in that region at the end of the *contract position day*; or
- the person is a *new entrant* in that region under clause 4A.D.3.

A person who is a *Market Customer* is not a *liable entity* for a region if:

- it is not registered for a connection point in that region at the end of the *contract position day*, or
- the aggregate of all loads at the connection points in that region for which it is a *Market Customer* at the end of the *contract position day* is equal to or less than 10 GWh per annum.

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<sup>4</sup> <https://www.aer.gov.au/retail-markets/retailer-reliability-obligation>

## 3.2 Qualifying contracts

A *qualifying contract* is a contract or arrangement between a *liable entity* and another party (which may be the same legal entity) that meets the criteria described in Section 14O(1) of the NEL.<sup>5</sup>

A *qualifying contract* can refer to a financial agreement, a contract or agreement for the generation of electricity, or a contract or agreement for the reduction in consumption of electricity.<sup>6</sup> We consider that a *qualifying contract* must reference the wholesale spot price for electricity (including reference to the purchase or sale of electricity) and be entered into to manage the *liable entity's* exposure to the volatility of the spot price. A registered demand response product can also be a *qualifying contract*. The contract or arrangement must also cover all or part of the *reliability gap period*.

## 3.3 Firmness adjustment and net contract position

*Liable entities* are required to record their *net contract position* when we issue a *T-1 reliability instrument*. This must then be provided to us by *reporting day* or by *new entrant reporting day* where applicable. The *net contract position* is determined by taking the firmness adjusted megawatts (MWs) of *qualifying contracts* that reduce a *liable entity's* exposure to the spot price and subtracting the firmness adjusted MWs of *qualifying contracts* that increase exposure. The *net contract position* must then be adjusted to account for any *non-qualifying contracts* which increase the *liable entities* exposure to spot price volatility.

Firmness is the extent to which the contract will reduce the *liable entity's* exposure to spot price volatility during the *reliability gap period*. A firmness factor is calculated and assigned to each *qualifying contract*. *Firmness methodologies* are set out in the sections 4, 5 and 7 of this guideline, and the *net contract position* reporting requirements are set out in section 8.

## 3.4 Default firmness methodology vs bespoke firmness methodology

The Rules specify two types of *qualifying contract*, *standard qualifying contracts* and *non-standard qualifying contracts*. This guideline must include the types of contracts or arrangements that constitute *standard qualifying contracts*.<sup>7</sup> *Qualifying contracts* not identified in Section 5 of this guideline as standard are considered to be *non-standard qualifying contracts*.

We have provided *default firmness methodologies* that must be applied when assessing the firmness of *standard qualifying contracts*. See section 5.

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<sup>5</sup> Section 14O(1) of the National Electricity Law defines a *qualifying contract* of a *liable entity* as a contract or other arrangement to which the *liable entity* is a party –

(a) that –

(i) is directly related to the purchase or sale, or price for the purchase or sale, of electricity from the wholesale exchange during a stated period; and

(ii) the *liable entity* entered into to manage its exposure in relation to the volatility of the spot price; or

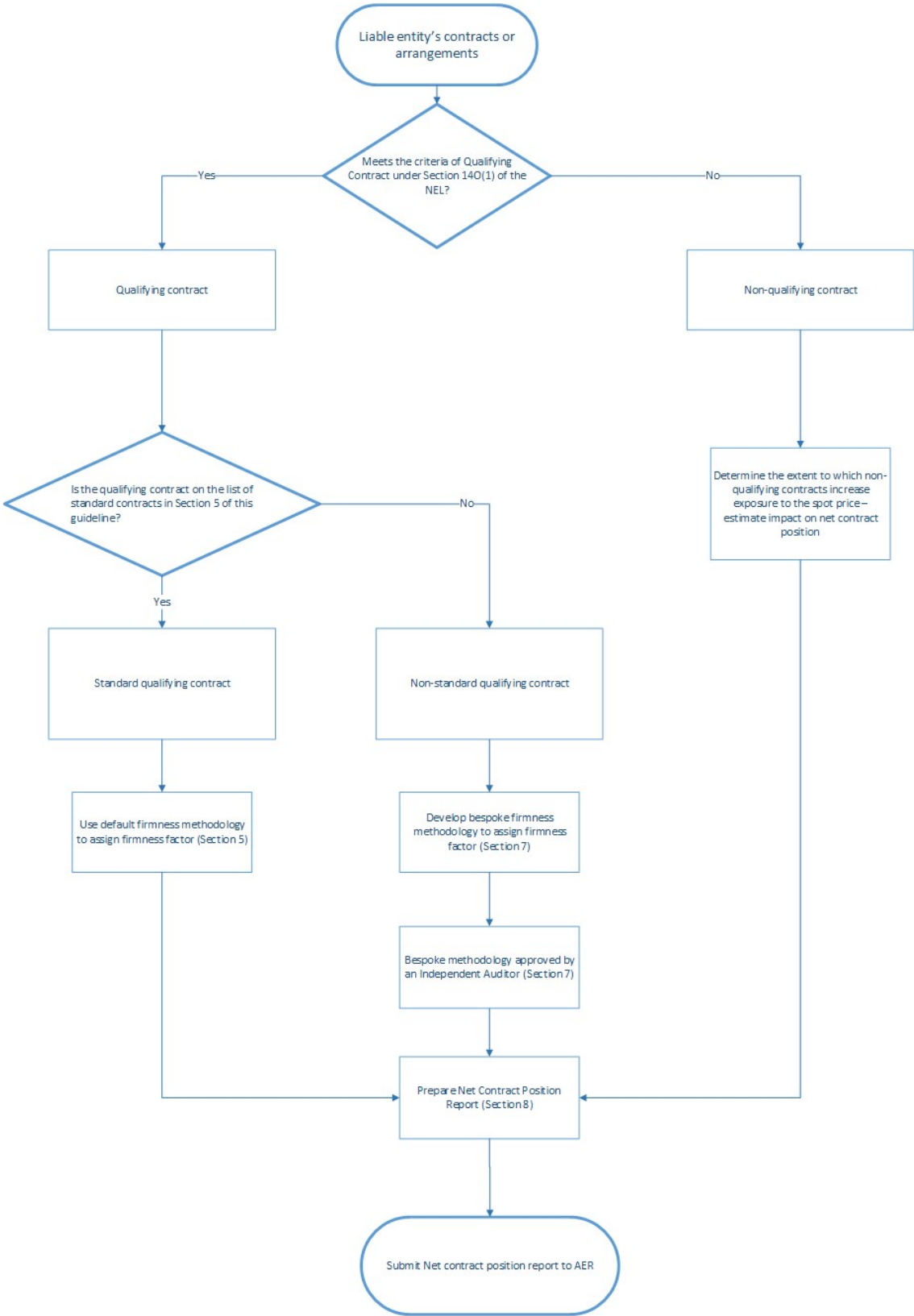
(b) of another type prescribed by the Rules to be a *qualifying contract*.

<sup>6</sup> NER 4A.E.3(b)

<sup>7</sup> NER 4A.E.8(b)(2)

For *non-standard qualifying contracts*, *liable entities* must develop a *bespoke firmness methodology* based on the *firmness methodology* in section 4 of this Guideline and the specific guidance given in section 7 of this Guideline. *Liable entities* must have *bespoke firmness methodologies* approved by an *Independent Auditor*. The auditor approval process is set out in section 7.1.2 of this guideline.

Figure 3.1 NCP Report process



## 4 Firmness methodology

To comply with the retailer reliability obligation (RRO) all *liable entities* must assess all *qualifying contracts* for firmness. *Liable entities* are required to submit a net contract position report (*NCP report*) to the AER by the appropriate *reporting day*. The *NCP report* must list each of a *liable entity's qualifying contracts*, the megawatts (MWs) covered by those contracts and each of these contracts' corresponding firmness factor. The *NCP report* must also include any adjustments made for *non-qualifying contracts* which increase the *liable entity's* exposure to volatility of the spot price. The *liable entity* may elect to exclude from their *NCP report* a demand side participation contract or other arrangement<sup>8</sup>. The firmness adjusted contracts are summed to give a *net contract position* for each trading interval within the *reliability gap period*.<sup>9</sup>

The principles for firmness adjustment are detailed in the following sections. The AER has used these principles when determining the *firmness methodologies* for *standard qualifying contracts* outlined in section 5 and when giving guidance on bespoke firmness methodologies in section 7.

### 4.1 Principles for firmness adjustment

The *firmness methodology* determines the extent to which a *liable entity's qualifying contracts* reduce or increase that *liable entity's* exposure to the volatility of the spot price in a region during the *gap trading intervals*.

All *qualifying contracts* must be allocated a firmness factor between zero and one for each trading interval within the *reliability gap period*. The lower the exposure for the buyer to the volatility of the spot price in a region, the higher the firmness factor. This is because the likelihood that the seller will 'defend' the contract by dispatching generation or other resources increases with greater exposure to spot market prices.

A *liable entity* must include both 'bought' and 'sold' contracts in their *net contract position*. A bought swap for example, would reduce the *liable entity's* exposure to spot price volatility (increase their *net contract position*) while a sold swap would increase their exposure to spot price volatility (decrease their *net contract position*).

The *default firmness methodologies* developed by the AER are based on the following *firmness principles*, as defined in Rule 4A.E.3:

- the degree to which the price terms of the *qualifying contract* reduces the *liable entity's* exposure to the volatility of spot prices during the *gap trading intervals*;
- the variability and profile of the volume settled or supplied under the *qualifying contract*;

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<sup>8</sup> Rules 4.A.E.6(b)(2)

<sup>9</sup> As noted in the previous section, *non-qualifying contracts* that increase a *liable entity's* exposure to spot price volatility must also be included in the *net contract position*.

- the likelihood of the *qualifying contract* providing cover to the *liable entity* during the *gap trading intervals* (including the extent to which that contract endures for the *reliability gap period*);
- any other contractual terms which limit the cover under the contract or otherwise reduce or increase the incentive for the counterparty to the *qualifying contract* to cover the contract position during the *gap trading intervals*;

Section 5 sets out a range of *default firmness methodologies* for determining the firmness factor of *standard qualifying contracts*. Contracts that don't meet the requirements of a *standard qualifying contract* need to be adjusted using a *bespoke firmness methodology*. This process is outlined in section 7.

## 4.2 Firmness approach taken by the AER

The firmness factor applied to a contract indicates the likelihood that a contract will cover a *liable entity* from spot price volatility during the *reliability gap period*. The firmness factor must be developed with consideration of the risk that the contract will not provide this cover during the *reliability gap period*. The AER considers the *firmness principles* described in the Rules<sup>10</sup> reflect three types of risk:

- Price risk – whether the contract limits a *liable entity's* exposure to a high spot prices during the *reliability gap period*
- Volume/shape risk – whether the contract sets a fixed volume of electricity, is variable (such as being tied to the output of a generator or, the performance of an interconnector), or varies based on the time of day
- Contract limitations – whether the *qualifying contract* contains other terms that limit the coverage from spot price volatility (such as a contract that has a maximum payout limit or a contract that only triggers when certain weather conditions occur).

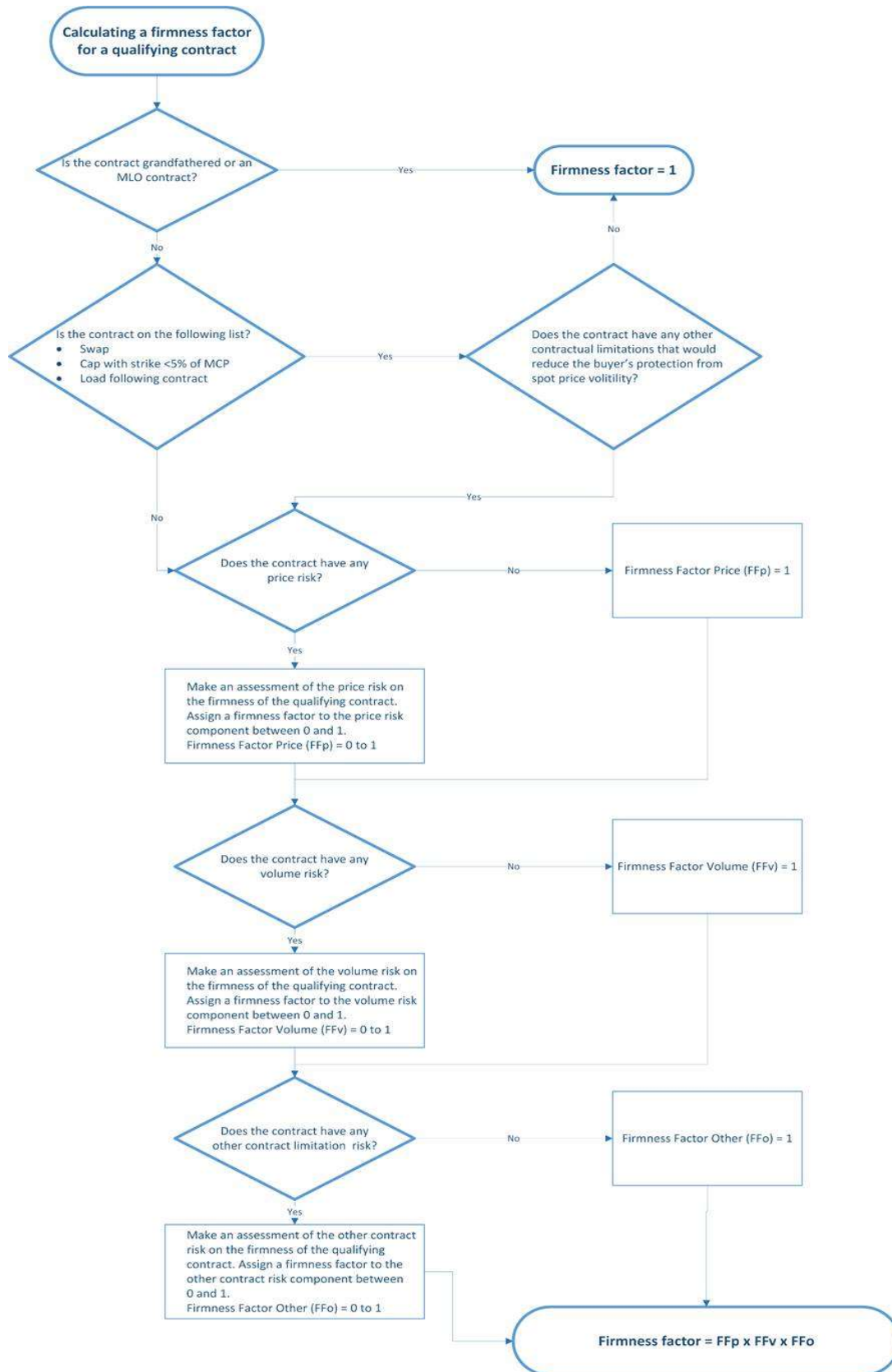
The firmness factor that a *liable entity* applies to a *qualifying contract* must represent the entity's best estimate of the reduction to spot market volatility provided by that contract. Figure 4.1 shows the AER's overall approach to developing a *firmness methodology*, based on the *firmness principles*. The AER has used this methodology to develop the *default firmness methodologies* that must be used for *standard qualifying contracts*.

*Liable entities* must reflect this methodology when developing *bespoke firmness methodologies* for use with *non-standard qualifying contracts*, and have these approved by an *Independent Auditor*.

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<sup>10</sup> Section 4A.E.3 of the rules

**Figure 4.1 Firmness Factor process**



## Assessing price risk

In assessing the price risk of a *qualifying contract*, a *liable entity* must have regard to whether, and to what extent, the contract reduces the buyers exposure to spot market volatility.

If a *qualifying contract* fixes or caps a price, then it reduces the buyer's price risk. For example, a contract that caps the price at \$300/MWh would offer significant price cover if the spot price approached the market cap price (MCP). The price risk of such a contract would be low, and the price risk firmness factor ( $FF_P$ ) high.

If the price is capped, but the cap strike price is high, the firmness is low. For example, a cap with a strike price of \$14,000/MWh would offer little cover to the buyer from spot price volatility. The price risk firmness factor ( $FF_P$ ) is low.

## Assessing volume/shape risk

A contract that fixes a volume during the *reliability gap period* or sets the volume to match a *liable entity's* actual load (load following contract) has no volume risk. These contracts will have a volume firmness factor ( $FF_V$ ) of one.

A volume firmness factor ( $FF_V$ ) lower than one is appropriate where there are terms that create uncertainty over the volume of coverage provided during the *reliability gap period*.

Volume uncertainty includes the following examples:

- uncertainty may occur because the contract is “run of plant” and therefore the volume is tied to actual generation output.
- uncertainty may also occur because the contract originates in a different NEM region, and coverage relies on the performance of the relevant interconnector to provide inter-regional settlements residue (IRSR).
- contract volume may vary for different times of the time of day, and may only cover some of the *reliability gap period*. For example, a *reliability gap period* exists from December to February. A Q1 contract would only cover the buyer in January and February. It would have a firmness factor of 0 for December.

*Liable entities* must adjust the firmness of these contracts based on a reasonable expectation of the volume of coverage they will give during the *reliability gap period*. Relevant factors include the historical performance of the “run of plant” generator, whether there are planned outages during the *reliability gap period*, load flows on the relevant interconnector, and analysis of whether the contract is likely to provide coverage for all or some of the *reliability gap period*.

## Assessing other contract limitation risks

A contract limitation is any contract term or condition that limits the contracts coverage during the *reliability gap period*. *Liable entities* must take contract limitations into account when firmness adjusting their contracts. Contract limitations may result in contract limitation firmness factor ( $FF_O$ ) lower than one.

For example, a *qualifying contract* may have a maximum payout limit, where the payout is capped at some limit, after which the *liable entity* must pay the spot price. Another contract limitation would be a cap that is only triggered once a pre-defined weather event has occurred.

If there are no contract limitations, or the contract limitations are irrelevant to the *qualifying contract's* coverage during the *reliability gap period*, then the  $FF_0$  is one. If there are relevant contract limitations, the  $FF_0$  is less than one.

In assessing the contract limitation firmness factor ( $FF_0$ ) the *liable entity* must use a reasonable expectation of the coverage the contract will provide. For example, if a contract has a maximum payout limit, the *liable entity* should assess the likelihood that this threshold would be breached, and what proportion of its MWs would be covered from spot price volatility during the *reliability gap period*. For weather related triggers, a *liable entity* should consider the likelihood that the event will occur during the *reliability gap period*, and adjust firmness accordingly. Any other contract limitations should be considered in a similar manner – either by reference to historical performance, likelihood of occurrence or another reasonable forecast of the likely impact of the contract limitation.

## 5 Default firmness methodologies for standard qualifying contracts

The RRO rules in the NER<sup>11</sup> defines two types of *qualifying contract*, *standard qualifying contracts* and *non-standard qualifying contracts*.

The AER can categorise *qualifying contracts* as standard. Under rule 4A.E.8(b)(3), the AER must specify *default firmness methodologies* for *liable entities* to use to adjust the firmness of *standard qualifying contracts*.

We consider *standard qualifying contracts* to be those most commonly used in the market and which have relatively straightforward terms and conditions for price, purchase, timing and volume. *Qualifying contracts* that contain more complex terms and conditions are non-standard. New contract types that are not listed in this guideline are also non-standard. *Non-standard qualifying contracts* need to be assessed using a *bespoke firmness methodology*. This process is described at section 7.

This is an interim guideline. The methodologies described here may change when our final guideline is published in 2020. To give *liable entities* the confidence to enter into contracts under the Interim Guideline, the Rules allow *liable entities* to continue to use the methodology specified in the interim guideline for contracts entered while the interim guideline is in effect.<sup>12</sup>

### 5.1 Treatment of standard qualifying contracts

We have listed those contracts we consider to be *standard qualifying contracts*, and their *default firmness methodologies* below. Contracts that do not fall into any of these categories are to be assessed for firmness using a *bespoke firmness methodology*. This is outlined in section 7.

#### 5.1.1 Standard electricity swaps and caps

##### **Definition**

Standard electricity swaps and caps are considered to be *standard qualifying contracts*. These are contracts traded on the ASX, over the counter or by a licenced broker.

- Swaps are an agreement to buy a set volume of electricity at a set price.

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<sup>11</sup> Rule 4A.A.1

<sup>12</sup> Rules 11.115.7 states that *Qualifying contracts* entered into by a *liable entity* after the publication of the interim RRO guidelines published under Rules clause 11.115.6(a) and before the RRO guidelines are made under Rules clause 11.115.6(c) will continue to be treated in accordance with such interim guidelines for the purposes of assessing firmness factor of contracts.

The AER's approach to Rules 11.115.7 is that contracts entered in to between the interim guideline being published and the final guideline being published may continue to be assessed using the *default firmness methodology* in the interim guideline. If the *default firmness methodology* in the final guideline has changed in a manner that would result in a higher firmness factor for a contract, the *liable entity* may choose to use the *default firmness methodology* outlined in the final contracts and firmness guideline.

- Caps are an agreement to buy a set volume of electricity for a maximum price once the spot price exceeds the strike price.<sup>13</sup>

### ***Our approach***

Swaps, which fix the price and quantity of electricity purchased, are considered firm and have a firmness factor of 1. These contracts are expected to cover a *liable entity* from volatility in the spot market, and do not include price, volume or contract limitation risks.

Caps set a price ceiling for *liable entities* for a set volume. At the time of publication, the standard strike price of a cap is \$300/MWh. A buyer of a \$300/MWh cap is only liable to pay the strike price if the spot price is higher than \$300/MWh. While caps limit the buyer's exposure to volatility in the spot price, the higher the strike price of a cap, the less financial cover they provide the buyer. Consequently, caps are considered to become less firm as their strike price increases.

Standard caps have a strike price and a volume – other conditions do not have to be met for these caps to be exercised. These contracts do not have volume or contract limitation risk. Caps with extra conditions around payouts are *non-standard qualifying contracts*, and need to be assessed for firmness under a *bespoke firmness methodology*.<sup>14</sup>

After consultation with market participants, we consider strike prices below 5 per cent of the market price cap (MPC) align with the intention of the RRO. Caps with a strike price above this would gradually become less firm, as the *qualifying contract* would offer the buyer less cover from spot price volatility. Our proposed approach reduces the firmness of a cap at until the strike price equals the MPC. At this point, the cap would offer no protection from spot price volatility, and the firmness factor would be 0.

### ***Firmness methodology for standard electricity swaps and caps***

The following formulas can be used to determine the firmness of a cap.

Strike price less than or equal to 5 per cent of the MPC

Firmness factor = 1

Strike price greater than 5 per cent of the MPC

Firmness factor =  $(1/0.95^2) \times (1 - \text{strike price}/\text{MPC})^2$

<sup>13</sup> More precisely, swaps and caps are a contract for difference (cfd). The buyer and seller agree on a strike price. The buyer of the cap or swap then pays the wholesale spot price, while the seller agrees to pay them the difference between the strike price and the spot price if the spot is higher than the strike (for a swap, the seller will pay the buyer if the strike is lower than the spot). The seller's net position for a swap is the strike price, and a cap is the lower of the strike and spot price.

<sup>14</sup> For example, an extra condition might be linked to the weather conditions on the day, where the cap would only come into effect where the temperature exceeded a certain pre-determined number.

### Examples<sup>15</sup>

A standard cap with a strike price up to \$725 has a firmness factor of 1.

A standard cap with a strike price of \$1000 has a firmness of 0.96.

$$\text{Firmness factor} = (1/0.95^2) \times (1 - \text{strike price}/\text{MPC})^2$$

$$\text{Firmness factor} = (1.108033) \times (1 - 1000/14500)^2$$

$$\text{Firmness factor} = 0.96$$

A standard cap with a strike price of \$10,000 has a firmness of 0.11.

$$\text{Firmness factor} = (1/0.95^2) \times (1 - \text{strike price}/\text{MPC})^2$$

$$\text{Firmness factor} = (1.108033) \times (1 - 10000/14500)^2$$

$$\text{Firmness factor} = 0.11$$

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<sup>15</sup> At the time of publication, the MPC is \$14500. The examples in this guideline use this input. As the MPC changes, this will need to be factored into a *liable entity's* calculations.

### 5.1.2 Options

Options are electricity futures or forward contracts that are traded on the ASX or 'Over the Counter' (either brokered or direct). They include standard options (e.g. captions and swaptions) and average rate options (also commonly referred to as "Asian options").

The buyer of an option has the right, but not the obligation, to buy (call) or sell (put) an underlying product such as a swap (a swaption) or a cap (a caption).

#### ***Standard options***

For a standard option, the right to purchase is usually exercised when the option is said to be "in the money". For example, a standard call option to purchase a swap is "in the money" if the strike price of that option is lower than the market price of the relevant swap at the time the option is required to be exercised. If the strike price on the call option was higher than the market price, then it would not be exercised. The option would ultimately not provide the *liable entity* with cover against volatility in spot prices during the *reliability gap period*.

#### ***Average rate options***

Average rate options differ from standard options. For these options, the payout is based on the average spot price over a specified period and settled automatically against the spot price outcome rather than being exercised on a particular date.

Average rate call options are bought to limit exposure to higher than expected spot price outcomes, similar to a cap. However, they manage different types of risk, and the incentive on the seller to defend the contracts is different. Standard caps limit the buyer's exposure to high price events, such as where prices are high in individual trading intervals. Average rate caps cover the buyer from high average prices, but not necessarily from individual high price events.

For example, if average spot prices are low over an averaging period, but there are some high price events, a cap would pay out, but the average spot price might not be high enough for the average rate option to payout. If average prices are high over the average period, because of underlying prices or high price events, the average rate option would pay out, limiting the buyer's exposure to ongoing high prices.

Consequently, while average rate options can provide a similar type of cover to standard caps, the approach outlined in 5.1.1 to adjusting the firmness for standard caps is not considered appropriate. Average rate options may not payout in high price events, where standard caps would. We consider average rate options should be adjusted for firmness in the same way as standard options.

#### ***AER approach***

We consider any standard option valuation approach could be used to adjust the firmness of these *qualifying contracts*. The option delta, provides a reasonable approximation of the likelihood of the contract being in place during the *reliability gap period*, and is therefore an appropriate measure of the contract's firmness.

As part of a normal risk management process, the owner of an option will calculate the option's delta (or the delta for a portfolio of options) using an option pricing model such as Black Scholes or Black 76. The delta value measures how much the price of the option will change with a movement in the underlying instrument. The delta value is also generally used as an approximation of the likelihood that the option will be exercised. Consequently, we consider the delta value from an option pricing model will provide a reasonable estimate of the likelihood that an option will be exercised – and provides a good measure of the cover the option provides the *liable entity* against volatility in the spot market.

### ***Firmness methodology for options***

Delta is a measure used by organisations to assess how much the price of the option will change with a movement in the value of the underlying. It is also used to approximate the likelihood that an option will be exercised. Delta ranges between zero and one for call options, and zero and negative one for put options. A delta close to one or negative one is more likely to be in the money at the expiry date (or payout if it is an average rate option). A delta close to zero is unlikely to be in the money by the expiry date (or provide any payout for an average rate option). The AER considers the absolute value of either call or put deltas is an appropriate measure of firmness.

*Liable entities* must use an industry accepted option pricing model to calculate option delta. When assessing the delta, a *liable entity* must use the volatility as published by a registered exchange.<sup>16</sup>

#### ***Example:***

A call option has a delta of 0.6. It is 60% likely to be in the money at the exercise date, and 40% likely to be out of the money. The firmness factor is 0.6

A put option has a delta of -0.8. It is 80 per cent likely to be in the money, and 20 per cent likely to be out of the money. The firmness factor is 0.8

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<sup>16</sup> The volatility used must be from the closest strike price to the value of the underlying instrument, as published by a registered exchange.

### 5.1.3 Load following contracts

This section outlines the AER's *firmness methodology* for assessing load following contracts.

A load following contract has a fixed price and a variable volume. The buyer and seller of the contract agree that the volume exactly matches the buyer's actual load at each trading interval. This volume is unknown until settlement data is available.

#### ***Our approach***

A load following contract is assessed differently for the buyer and seller of the contract. The buyer does not nominate a MW value for the contract when including it in the *NCP Report*. The seller must assign a MW value for the contract.

#### **Firmness Methodology: Buyer of a load following contract**

The buyer of a 100% load following contract has no exposure to spot price volatility. This contract is fully firm unless the contract contains terms which limit the coverage of the swap. If the contract includes additional terms, the firmness is adjusted based on the *firmness principles* outlined in section 4

- A buyer of a load following contract assigns a firmness factor of 1 to the load following contract.
- The buyer doesn't nominate a volume in the *NCP report*.
- The buyer must nominate the terms of the contract in the *NCP Report* which allow the AER to calculate the *net contract position* after settlement data is received. These terms must include the period covered by the contract and a firmness factor.

#### **Buyer Example**

A *reliability gap period* has been identified for 16:00 – 19:00 for all weekdays in February 2023. Liable Entity G has bought a load following contract. The contract is in place from Jan 1 2023 – Dec 31 2023. The contract covers them for 100% of their load and has no additional terms that might limit the coverage of the contract.

In their *NCP report* submitted to the AER at *reporting day*, Liable Entity G submits the following information:

Contract Name:	Load Following Contract A
Contract Start Date:	01 January 2023
Contract End Date:	31 December 2023
% of Load	100%
Firmness Factor:	1.0

At 40 weeks, the AER receives from AEMO a scaled-back demand for Liable Entity G for each trading interval to be assessed for compliance. In this example, there are 3 trading intervals under assessment. The AER calculates the *net contract position* based on the scaled-back demand figure. The calculated *net contract position* is equal to the scaled-back demand figure for each trading interval.

Trading Interval	Liabe Entity G Scaled-back demand	Liabe Entity G Net contract position**
17-Feb-2023 18:00	20.3 MW	20.3 MW
17-Feb-2023 18:30	21.2 MW	21.2 MW
180Feb-2023 17:30	19.9 MW	19.9MW
** Calculated by the AER		

### Firmness Methodology: Seller of a load following contract

The seller of a load following contract must include the contract in their *NCP report* if they are a *liable entity*. The actual volume of the contract isn't known at T-1. The *liable entity* must use the one-in-two year demand forecast for the load as the basis for their *net contract position*.

The AER uses the figure in the *NCP report* in compliance calculations. The AER won't use the load's actual demand for compliance.

#### Seller Example

Liabe Entity X has sold a load following contract to a small retailer. The small retailer has provided Liabe Entity X with their one-in-two year load forecast.

A sample of this one-in-two year load forecast is:

Feb 03 16:30	Feb 03 17:00	Feb 03 17:30	Feb 03 18:00	Feb 03 18:30	Feb 03 19:00
13.1 MW	13.4 MW	13.5 MW	13.1 MW	12.5 MW	11.8 MW

Liabe Entity X would use this one-in-two year load forecast as the basis for the forecast of the volume of the sold load following contract. Liabe Entity X would submit the following to the AER as part of their *NCP report*.

Contract Name	TI	MW	Firmness Factor
Load Following Contract A	Feb 03 16:30	-13.1	1.0
Load Following Contract A	Feb 03 17:00	-13.4	1.0
Load Following Contract A	Feb 03 17:30	-13.5	1.0
Load Following Contract A	Feb 03 18:00	-13.1	1.0
Load Following Contract A	Feb 03 18:30	-12.5	1.0
Load Following Contract A	Feb 03 19:00	-11.8	1.0

### 5.1.4 Grandfathered contracts

Grandfathering arrangements as defined in the Rules 11.115.8 apply to *Market Customers* and *opt-in customers*. They do not apply to licenced retailers (a licenced retailer is defined in the NER<sup>17</sup> as a person who holds a retailer authorisation under the NERL or an electricity retail licence under the *Electricity Industry Act 2000* (Vic)).

A grandfathered contract is a *qualifying contract* up to the load covered by the contract and need not be firmness adjusted for the purposes of calculating the *net contract position*. The grandfathered contract is deemed to have a firmness of 1.

A grandfathered contract can be a retail, wholesale or demand response contract. A grandfathered contract does not apply in relation to a *liable entity's* own generation or load curtailment.

A grandfathered contract must meet the following criteria:

- Is a *qualifying contract* which reduces the *Transitional Customer's* exposure to the volatility of the spot price in a relevant region during the *gap trading intervals* for the load for which it is a *liable entity*; and
- The *qualifying contract* was in effect as at 10 August 2018

A contract is grandfathered until:

- the end of the term of the *transitional contract* specified in that *transitional contract* as at 10 August 2018, excluding any extension or renewal of such term even if the right to extend or renew existed as at 10 August 2018; or
- if no term is specified, 1 July 2023.

### 5.1.5 MLO Products

*MLO products*, as defined in the Rules 4A.G.22, are bought by *liable entities* on an exchange to manage their exposure to spot market volatility. *MLO products* are sold by *MLO generators* to satisfy their MLO obligation<sup>18</sup>. A *MLO product* need not be firmness adjusted for the purposes of calculating the *net contract position*. The *MLO product* is deemed to be a *qualifying contract* and have a firmness of one<sup>19</sup>.

The Rules<sup>20</sup> defines a *MLO product* as an electricity 'derivative' (within the meaning given to that word in the *Corporations Act 2001* (Cth)) contract which:

(1) has a contract unit of either:

- (i) 1 MW of electrical energy per hour based on a base load period, being from 00:00 hours Monday to 24:00 Sunday (in the relevant region) over the duration of the contract period (as specified at clause 4A.G.22(a)(2)(ii)); or

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<sup>17</sup> Rules 11.115.8

<sup>18</sup> MLO Guideline. <https://www.aer.gov.au/retail-markets/retailer-reliability-obligation>

<sup>19</sup> Rules 4A.E.1(d)

<sup>20</sup> Rules 4A.G.22

(ii) 1 MW of electrical energy per hour based on a peak load period, being from 07:00 hours to 22:00 hours (in the relevant region) Monday to Friday (excluding public holidays) over the duration of the contract period (as specified at clause 4A.G.22(a)(2)(ii)), provided that, if the trading intervals identified in the relevant *reliability gap period* apply only during parts of a day, then the contract unit must include those trading intervals; and

(2) satisfies each of the following criteria:

- (i) it is a contract relating to electrical energy bought and sold in the region in which the forecast reliability gap has been identified;
- (ii) the contract period is monthly or quarterly, provided the contract period covers all of the trading intervals identified in the relevant forecast *reliability gap period*, in that month or quarter;
- (iii) the maximum contract unit is 1 MWh;
- (iv) the contract price is quoted in AUD per MWh; and
- (v) the contract quantity is for an identical contract unit in each trading interval.

For more information on the MLO and MLO products, refer to the AER guideline on Market Liquidity Obligation (MLO)<sup>21</sup>.

### 5.1.6 Summary of standard qualifying contracts

**Table 5.1 Summary of default firmness methodologies for standard qualifying contracts**

Standard contract	Default firmness methodology
Swaps	Applies to swaps with a fixed price and volume where no other contract limitations are present. (Refer to guideline section 5.1.1)  <b>Firmness factor = 1</b>
Caps with a strike price ≤ 5% of MPC	Applies to caps with a strike price ≤ 5% of MCP where no other contract limitations are present. (Refer to guideline section 5.1.1)  <b>Firmness factor = 1</b>
Caps with a strike price > 5% of MPC	Applies to caps with a strike price > 5% of MCP where no other contract limitations are present. (Refer to guideline section 5.1.1)  <b>Firmness factor = <math>(1/0.95^2) \times (1 - \text{strike price}/\text{MPC})^2</math></b>

<sup>21</sup> <https://www.aer.gov.au/retail-markets/retailer-reliability-obligation>

Options	<p>Options are electricity futures or forward contracts that are traded on the ASX or 'Over the Counter' (either brokered or direct).</p> <p><i>Liable entities</i> must use an industry accepted option pricing model to calculate option delta. When assessing the delta, a <i>liable entity</i> must use the volatility of the closest strike to the value of the underlying as published by a registered exchange.</p> <p>(Refer to guideline section 5.1.2)</p> <p><b>Firmness Factor = the absolute value of either call or put delta</b></p>
Load following contracts (bought)	<p>A load following contract has a fixed price and a variable volume. The buyer and seller of the contract agree that the volume exactly matches the buyer's actual load at each trading interval.</p> <p>The buyer of a 100% load following contract has no exposure to spot price volatility. This contract is fully firm unless the contract contains terms which limit the coverage of the swap.</p> <p>(Refer to guideline section 5.1.3)</p> <p><b>Firmness Factor = 1</b></p>
Load following contracts (sold)	<p>A load following contract has a fixed price and a variable volume. The buyer and seller of the contract agree that the volume exactly matches the buyer's actual load at each trading interval.</p> <p>The seller of a load following contract must use the one-in-two year demand forecast for the load as the basis for their <i>net contract position</i>.</p> <p>(Refer to guideline section 5.1.3)</p> <p><b>Firmness Factor = 1</b></p>
Grandfathered contracts	<p>Grandfathered contracts must meet the definition of grandfathered arrangement in section 11.115.8 of the Rules. Grandfathered contracts only apply for <i>Market Customers</i> and <i>opt-in customers</i>.</p> <p>(Refer to guideline section 5.1.4)</p> <p><b>Firmness factor = 1</b></p>
MLO Products	<p>MLO products must meet the definition of MLO product in section 4.A.G.22(a) of the Rules.</p> <p>(Refer to guideline section 5.1.5)</p> <p><b>Firmness factor = 1</b></p>

## 6 Non-qualifying contracts

A contract or arrangement is non-qualifying if it does not meet the requirements of the NEL and NER. The AER considers *qualifying contracts* are those that have a direct link to the wholesale electricity spot price, and are entered into for the purpose of managing spot price volatility. Contracts or arrangements without a direct link to the spot price, or the purchase or sale of electricity on the spot market, do not meet this criteria and are not *qualifying contracts*.

Nonetheless, *liable entities* must take account of the effect of non-qualifying contracts in their *net contract position*. Rule 4A.E.2 (c) of the NER requires that *liable entities* make adjustments to their *net contract position* to account for any contracts or other arrangements that would increase the exposure of the *liable entity* to the volatility of the spot price. For example, where a *liable entity* purchases a standard cap from a generator, and separately sells a forward contract that compensates the generator for lost revenue from the cap (without referencing the spot price). The cover provided from the bought standard cap (a *qualifying contract*) would be removed by the sold forward contract (a non-qualifying contract). The *liable entity* would be required to adjust its *net contract position* to account for this. The Rules do not allow *liable entities* to report *non-qualifying contracts* that have the effect of decreasing exposure to the spot price.

## 7 Bespoke firmness methodologies

*Liable entities* must develop *bespoke firmness methodologies* to firmness adjust *non-standard qualifying contracts*. A *bespoke firmness methodology* must be approved by an *Independent Auditor*.

### 7.1 Development of a bespoke firmness methodology

*Bespoke firmness methodologies* must be developed in accordance with the *firmness methodology* outlined in section 4 of this guideline. *Liable entities* must follow the process described below to assess the *qualifying contract's* price risk, volume/shape risk and any other contract limitations to determine an appropriate firmness factor.

Where aspects of a *default firmness methodology* are relevant, they should be used. For example, if a *non-standard qualifying contract* has a price term similar to a standard cap, its firmness adjustment should include an adjustment for price risk similar to the *default firmness methodology* for standard caps. Firmness would also need to be adjusted for the non-standard terms and conditions that relate to volume/shape risk and contract limitations. For example, if a *qualifying contract* specified a maximum daily payout, the firmness would need to be adjusted based on a reasonable expectation of whether that threshold would be exceeded during the *reliability gap period*.

### 7.2 Approval process for bespoke firmness methodologies

#### ***Independent Auditor approval of bespoke firmness methodologies***

If a *liable entity's net contract position* includes *non-standard qualifying contracts*, it must be accompanied by a report from an *Independent Auditor* from the *Auditor Panel* established by the AER.<sup>22</sup> The report must state whether the *Independent Auditor* considers the *bespoke firmness methodology* and firmness factor used in relation to the *non-standard qualifying contract* has been developed and applied in accordance with the *firmness principles* and the *firmness methodology* set out in section 4 of this guideline.

A *bespoke firmness methodology* and firmness factor approved by an *Independent Auditor* and included by a *liable entity* in its *NCP report* is binding on the AER in the absence of fraud or manifest error.<sup>23</sup>

The AER will not interpret “manifest error” to allow the AER the discretion to overturn a firmness factor approved by an auditor where the AER disagrees with the auditor’s approach. “Manifest error” will only apply where there has been a clear and obvious error in the process. For example, if there was a calculation error in the firmness factor, this might count as a “manifest error”.

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<sup>22</sup> The *Independent Auditor* appointed from the Auditor Panel must be an independent person from the *liable entity*.

<sup>23</sup> Rule 4A.E.5(e) of the NER

## ***Establishment of an Auditors Panel***

Under the NER<sup>24</sup>, the AER must establish and maintain an *Auditors Panel* who may be appointed by a *liable entity* as an *Independent Auditor*. In establishing and maintaining the *Auditors Panel*, we must have regard to:

- the need for a person to have sufficient experience and expertise in energy derivatives and energy contracts to carry out the functions of the *Independent Auditor*;
- whether the person is an *independent person*.

The AER will conduct an expression of interest process to establish an *Auditors Panel*. We expect this process to commence in July 2019 and be finalised by November 2019. We will then publish the *Auditors Panel* on our website. We are required to review the composition of the *Auditors Panel* every four years.

## **7.3 Guidance on bespoke firmness methodologies for common non-standard qualifying contracts**

The AER has identified several common *qualifying contracts* that, while commonly relied upon by *liable entities*, are not standard, and require the use of a *bespoke firmness methodology*. We have provided specific guidance on the principles that must be applied when developing a *bespoke firmness methodology* for these *qualifying contracts*.

### **7.3.1 Power purchase agreements**

Power purchase agreements (PPAs) are a contract or arrangement to buy a share of a generator's electricity output over a period of time. PPAs are typically entered into to purchase the output of renewable generation such as wind or solar.

The volume covered by the PPA contract will vary based on the actual generation of the plant for each trading interval. The owner of a PPA would be entitled to a proportion of this electricity output at an agreed price. For example, a solar PPA would provide good contract coverage during daylight hours, but offer no coverage at night.

### ***AER approach***

*Liable entities* that own PPAs limit their exposure to volatility in the spot market if the generation assets are generating electricity during the *reliability gap period*. The cover provided to *liable entities* by the contract is directly linked to the performance of generation assets. Consequently, PPAs expose *liable entities* to volume risk. Where PPAs exhibit other contract limitations, such as a link to weather events, they are *non-standard qualifying contracts* and need to be assessed under a *bespoke firmness methodology*.

*Liable entities* must apply a firmness factor that reflects the level of volume risk in the contract. A *liable entity* may assess multiple PPAs as a portfolio. However, a firmness factor must be assigned to each PPA in the *NCP Report*.

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<sup>24</sup> Rule 4A.E.5 of the NER

## Firmness methodology for power purchase agreements

*Liable entities* must consider these inputs when calculating the firmness factor for PPAs:

- (1) The recent historical performance of the generator. Historical data must be recent (within 3 years) and correspond to the same time of year as the *reliability gap period*. Where historical data is not available, the *liable entity* must make reasonable efforts to estimate the likely output. For example, the *liable entity* may use the output of an existing wind or solar farm that is located in the same area as the generator, or the planning data relied on by the generator when choosing to build the wind or solar farm.
- (2) Whether the generation behind the PPA includes storage, and the extent to which this may provide additional firmness during the *reliability gap period* (i.e. the capacity (in MW and MWh) of a battery would determine how much and for how long a firm electricity supply could be provided)
- (3) Any planned outages forecast for the *reliability gap period*. A planned outage would reduce the firmness factor.
- (4) Planned upgrades to the generating assets. If upgrades have recently been done or are planned before the *reliability gap period* (and meet AEMO's commitment criteria), this adjustment may result in a higher forecast generation level than historical data would suggest.

### Wind Farm PPA Example:

A *reliability gap period* of 4 hours for each weekday of a one month period is issued. To determine the volume risk of the PPA (and, ultimately, the appropriate firmness factor), the *liable entity* must forecast the volume delivered by the contract. As a PPA's volume is directly related to generation output, the *liable entity* must estimate the likelihood of generation being available over the duration of the *reliability gap period*.

In this example, Liable Entity Y holds a PPA with Wind Farm X, which entitles it to 10 per cent of Wind Farm X's output. If Wind Farm X is operating at full capacity, it will generate 50MWs, and Liable Entity Y is entitled to 5MWs of output. The price per MWh is agreed, and there are no other contract limitations.

The Wind Farm X is new, and does not have historical generation data. However, it has planning information on wind flows in the area that it has used to estimate its output. Liable entity Y uses this planning information and assesses that the average generation for the *reliability gap period* is likely to be 20 per cent of capacity. Liable Entity Y will assign a 0.2 firmness factor to its volume. 1MW will count towards its *net contract position* for each trading interval in the *reliability gap period* (i.e.  $0.2 \times 5\text{MWs} = 1\text{MW}$ ).

### 7.3.2 Interregional contracts

This section outlines the AER's guidance for developing a *bespoke firmness methodology* for interregional contracts.

#### **Definition**

Interregional contracts offer *liable entities* the option to contract outside the region of their load. Contracting in this manner carries a higher level of risk as it relies on the operation of interconnectors to minimise divergence between the spot prices in each region. The participant takes on the risk that if the prices in the regions of interest separate as its interconnector(s) bind, the assumed correlation between the spot price in the two regions may differ from expectations.

An interregional position is either covered or uncovered. A position is covered when a *liable entity* pairs their interregional position with the purchase of settlements residue auctions (SRAs) which give them access to a proportion of IRSR across the relevant interconnector. An uncovered interregional position is where the participant does not reduce its exposure to the spot price differential by purchasing a portion of the IRSR.

#### **Our approach**

An interregional contract must be paired with proportion of IRSR to be classified as a *qualifying contract*. The contract and the IRSR must cover all or part of the *reliability gap period* identified in the *reliability instrument*.

*Liable entities* with an interregional contract paired with IRSR must make an assessment of the firmness of this contract using the *firmness methodology* below.

#### **Firmness methodology for an interregional contract**

At a minimum, *liable entities* must use these inputs when calculating the firmness factor for an interregional contract:

1: Contract risk: what is the firmness factor assigned to the underlying contract (outside the region)? The firmness factor of the underlying contract should be calculated using the relevant *default* or *bespoke firmness methodology*. For example, if the underlying contract is a swap with a fixed price and volume, the contract risk firmness factor is 1.0.

2: Volume risk:

- What proportion of the IRSR does the *liable entity* own on the corresponding interconnector at *position day*?
- What is the likely interconnector limit during periods of price separation? When there is price separation between the two regions, the contract becomes ineffective in reducing the *liable entity's* exposure to spot price volatility. The IRSR can increase the cover but is restricted by the interconnector limit (in MW). To assess the cover from spot market volatility provided by the IRSR, the *liable entity* must assess the probable limit of the interconnector during the *reliability gap period* by considering:

- Recent historical performance of the interconnector. Historical data must be recent (within 3 years) and correspond to the same time of year as the *reliability gap period*.
- Any planned outages forecast for the *reliability gap period*. A planned outage of the interconnector would reduce the firmness factor.
- Planned upgrades to the interconnectors. If upgrades to the interconnector have recently been completed or are planned before the *reliability gap period*, this adjustment may result in a higher forecast limit on the interconnector than historical data would suggest.

**Example:**

During a *reliability gap period* in South Australia, Liable Entity Y has a contract in Victoria and owns SRAs on the Vic-to-SA interconnectors (Heywood and Murraylink) which entitles it to a proportion of the total IRSR.

Liable Entity Y has a 220MW swap contract in Victoria that covers the entire *reliability gap period*.

In calculating the firmness factor of the contract, Liable Entity Y uses the following inputs:

- (1) What is the firmness factor assigned to the underlying contract? The underlying contract is a swap. Assessed using the *default firmness methodology* in section 5, the swap has a firmness of 1.
- (2) Volume risk assessment.

Liable Entity Y has successfully purchased 220 SRAs on the Vic-to-SA interconnector (out of a total 880 SRAs sold).

The return on the IRSR depends on the actual flows on the Vic-to-SA interconnectors during the high price/high demand events. Factoring in the recent historical performance of the interconnector during periods corresponding to the *reliability gap period*, Liable Entity Y has determined that the Vic-to-SA interconnector has a probable limit of 550 MW during periods of price separation (within the *reliability gap period*). This equates to 62.5% of the nominal capacity of 880MW. Each SRA has a firmness of 0.625.

As the underlying contract has a firmness factor of 1 and Liable Entity Y has purchased 220 SRAs to pair with the 220MW swap contract, the firmness factor assigned to this contract is 0.625.

### 7.3.3 Generation within vertically integrated retailers

This section outlines the AER's guidance for developing a *bespoke firmness methodology* for the contribution of generation within a vertically integrated retailer's portfolio to their *net contract position*.

The goal of the RRO is to improve the reliability of the electricity system during periods of forecasted shortage (the *reliability gap period*). To ensure there is adequate supply, internal hedges are assessed for their firmness (or the likelihood that they will reduce the *liable entity's* exposure to volatility in the spot market) and included in the *liable entity's* NCP report.

A vertically integrated *liable entity* is a business that owns both retail and generation assets. The *liable entity* can limit their exposure to spot price volatility by reserving part of its projected generation output to hedge against its retail load. This arrangement (internal hedge) within the *liable entity* is a *qualifying contract* for the purposes of the RRO, provided it is documented and evidenced in the manner described below.

For an internal hedge to be a *qualifying contract*, the *liable entity* must record and be able to provide to the AER documents developed by the generation and retail arms of the business providing evidence of the following:

- The total generation capacity of the *liable entity*
- The proportion of total generation capacity reserved for internal hedging
- The calculation of the firmness factor in accordance with the guidance set out below (including a list of the factors and information used to inform the calculation)
- The firmness adjusted internal hedge position

#### **Our approach:**

*Liable entities* must firmness adjust an internal hedge to reflect how likely the hedge is to limit the *liable entity's* exposure to volatility in the spot market. The amount of cover provided by the arrangement will depend on the generator's ability to generate during the *reliability gap period*. Consequently, the *liable entity* must consider the likely generation during the *reliability gap period* when determining how much cover the internal hedge is likely to provide.

The AER requires the *liable entity* to assess the firmness of internal hedges within their portfolio and assign a firmness factor to each internal hedge for each trading interval within the *reliability gap period*. Outlined below is the AER's methodology for a firmness assessment of an internal hedge.

A *liable entity* may assess multiple generation units as a portfolio. The *liable entity* must record and be able to provide to the AER supporting documents to justify firmness calculations for internal hedges.

#### **Firmness methodology for internally hedged generation**

At a minimum, *liable entities* must consider these inputs when calculating the firmness factor for internal hedges:

- (1) Recent historical performance of the generator. Historical data must be recent (within 3 years) and correspond to the same time of year and trading intervals as the *reliability gap period*.

- (2) Any planned outages forecast for the *reliability gap period*. A planned outage of a generating unit would reduce the firmness factor to 0 for any *gap trading intervals* coinciding with the planned outage.
- (3) Planned upgrades to the generating units. If upgrades have recently been done or are planned before the *reliability gap period* and are consistent with AEMO's committed criteria, this adjustment may result in a higher forecast generation level than historical data would suggest.
- (4) Any fuel considerations. For a hydro plant this would include modelling of dam storage levels and any impact this would have on the capacity of the plant during the *reliability gap period*.

### Battery Example:

The *reliability instrument* has confirmed a *reliability gap period* of January and February from 16:00 to 20:00 on weekdays.

The *liable entity* owns a battery with a capacity of 25MW/50MWh. The *liable entity* may choose how to assign the firmness factors to best meet forecast demand requirements. Below are 2 examples of how the same battery may be treated by the *liable entity*.

Firmness factor profile example 1: The *liable entity* plans to run the battery at maximum capacity (25MW) for 2 hours.

TI	16:30	17:00	17:30	18:00	18:30	19:00	19:30	20:00
Capacity	25MW	25MW	25MW	25MW	25MW	25MW	25MW	25MW
Firmness Factor	0	0	1.0	1.0	1.0	1.0	0	0

Firmness factor profile example 2: The *liable entity* plans to run the battery over 3 hours to better match the shape of their demand.

TI	16:30	17:00	17:30	18:00	18:30	19:00	19:30	20:00
Capacity	25MW	25MW	25MW	25MW	25MW	25MW	25MW	25MW
Firmness Factor	0	0.4	0.8	1.0	1.0	0.6	0.2	0

### Solar Farm example:

The *liable entity* must forecast generation for solar farm/s over the *reliability gap period*. Where historical data is not available, the *liable entity* must make reasonable efforts to estimate the likely output. For example, the *liable entity* may use the output of an existing wind or solar farm that is located in the same area as the generator, weather patterns for the area or the planning data relied on by the generator when choosing to build the wind or solar farm.

The RRO is focused on reliability during the *reliability gap period*, therefore historical data relevant to the *reliability gap period* (time of year and trading intervals) must be used.

The forecast generation of a solar farm results in different firmness factors across trading intervals. A firmness factor for each trading interval of the *reliability gap period* is calculated. A solar farm would have a high firmness factor in the afternoon but it would decline to 0 into the evening once the sun has gone down.

Example of the firmness factors applied to a solar farm for a summer *reliability gap period*:

TI	16:00	16:30	17:00	17:30	18:00	18:30	19:00	19:30
Firmness Factor	0.96	0.96	0.92	0.82	0.74	0.41	0.02	0.00

### 7.3.4 Demand response products

This section outlines the AER's guidance for developing a *bespoke firmness methodology* for demand response products as *qualifying contracts*.

#### Definition

A demand side participation product is a contract or arrangement under which non-scheduled load is curtailed or, in certain circumstances, the provision of unscheduled generation. It is a *qualifying contract* if it meets all of the following criteria:

- meets the requirements of section 14O(1)(a)<sup>25</sup> of the NEL
- is registered in AEMO's Demand Side Participation Information Portal (DSPIP)<sup>26</sup>
- Is allocated to a *liable entity*
- Is in-market i.e. not contracted with AEMO under Procurer of Last Resort (PoLR) or Reliability and Emergency Reserve Trader (RERT)

*Liable entities* can rely on demand response to cover their share of system *peak demand*. They must ensure the contract is registered with AEMO before *contract position day* to ensure that AEMO has the visibility it needs to accurately forecast demand and supply.

#### Our Approach

A demand response product must be allocated to the *liable entity*. The demand response product must be registered in AEMO's DSPIP. An *opt-in customer* or a *Market Customer* can submit an internal demand response arrangement in the DSPIP.

A demand response product must be allocated to the relevant NMI<sup>27</sup>/s. The AER requires the *liable entity* to submit as part of their *NCP Report* a list of the NMI/s corresponding to

<sup>25</sup> A *qualifying contract* of a *liable entity* is a contract or other arrangement to which the *liable entity* is a party (a) that (i) is directly related to the purchase or sale, or price for the purchase or sale, of electricity from the wholesale exchange during a stated period; and (ii) the *liable entity* entered to manage its exposure in relation to the volatility of the spot price

<sup>26</sup> Rules 4.A.E.1(c)

<sup>27</sup> National Metering Identifier

each demand response *qualifying contract*. Refer to section 8 for more detail on the format of the *NCP report*.

When assessing the firmness factor for a demand response contract, the *liable entity* must take into consideration any factors which limit the ability for the contract to be used during a *one-in-two year peak demand* event during the *reliability gap period*.

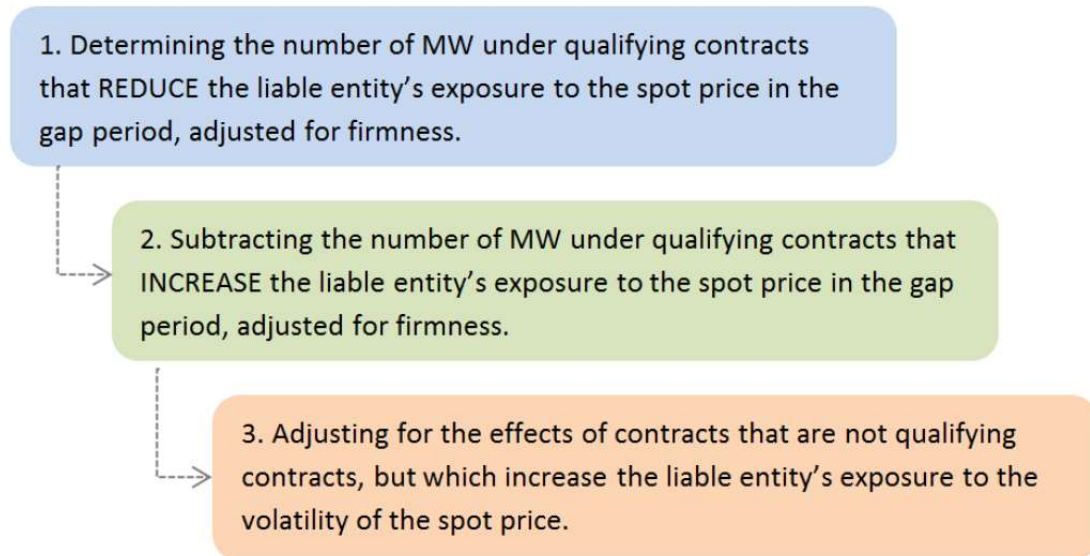
These factors include but are not limited to:

- How much control the *liable entity* has when curtailing load. If the customer providing the demand response has full discretion whether to provide the demand response, the firmness factor would be low.
- Maximum duration load can be curtailed for an event or total duration load can be curtailed over a contract period.
- How long the load takes to respond to a curtail notice.
- Number of times a load can be curtailed over the contract period.

## 8 Net contract position

A *liable entity's net contract position* is the number of firmness adjusted MWs the *liable entity* has under its *qualifying contracts* during a *reliability gap period*. It is the net of all *qualifying contracts* that reduce exposure to the spot price, and all *qualifying contracts* and *non-qualifying contracts* that increase exposure to the spot price.

**Figure 8.1 Net contract position**



*Liable entities* are required to record their *net contract position* on the *position day*.<sup>28</sup> *Liable entities* must then submit their *NCP report* to the AER by the *reporting day*.<sup>29</sup>

### 8.1 Net contract position report

#### 8.1.1 NCP report summary

The *NCP report* is made up of a number of documents (submitted as PDFs) and data files (submitted as CSVs). Rule 4A.E.6(b) sets out the information required to be included in an *NCP report*. We have provided a summary of the information required, and examples of the fields required in the data files.

<sup>28</sup> *Position day* – The AER must specify a *contract position day* and a *new entrant contract position day* when it makes a *T-1 reliability instrument*. For existing *liable entities*, the *contract position day* must be a day in the period which starts 7 days before the *T-1 cut-off day* and ends on the *T-1 cut off day* (Rule 4A.C.10(b) of the *NER*). For *new entrants*, the *new entrant contract position day* must be after the first day of the *reliability gap period*. The *T-1 cut-off day* for a forecast *reliability gap period* is the day that is 1 year before the day the *forecast reliability gap period* for the forecast reliability gap starts – Section 14G(4) of the *NEL*.

<sup>29</sup> *Reporting day* – The AER must also set the *reporting day* in a *T-1 reliability instrument* (Rule 4A.C.10(d) of the *NER*). The *reporting day* must not be set within 2 months of the *contract position day*, or, for *new entrants*, within 10 business days of the *new entrant contract position day*. The AER expects to set the *reporting day* 2 months after the *contract position day* and for *new entrants* 10 business days after the *new entrant contract position day*. However, we reserve the right to set a longer timeframe if necessary.

1. Summary of the *net contract position* for each *gap trading interval*. The *net contract position* is a MW value assigned to each trading interval within the *reliability gap period*. Expected maximum demand for the *gap trading intervals* based on its *net contract position* for those intervals (without taking into consideration any demand response arrangements). Both the *net contract position* and the expected maximum demand may be submitted in the same CSV file. (CSV file). See example 1
2. Data files, listing each *qualifying contract* and the associated MWs in the *reliability gap period* (CSV files). These can be submitted in 2 parts.
  - *Qualifying contracts* that cover multiple trading intervals and have the same firmness factor may be submitted in summary form (e.g. quarterly swaps that cover the same period during the *reliability gap period* may be reported in a single line). See example 2.
  - *Qualifying contracts* that have different firmness factors for different *gap trading intervals*. These must be listed by *gap trading interval*. See example 3.
3. Listing of bought load following contracts. CSV or PDF file. See example 4
4. NMIs assigned to each demand response contract (CSV file). See example 5.
5. Document outlining any adjustments made for *non-qualifying contracts* that increase exposure to spot price volatility (PDF file for report documents, Excel 2016 or earlier (32bit) files if showing detailed calculations).
6. *Independent Auditor* reports for *bespoke firmness methodologies* (PDF file for report documents, Excel 2016 or earlier (32bit) files if showing detailed calculations).
7. Document signed by a Company Director (PDF file), certifying that:
  - the information provided is accurate;
  - all information required by Rule 4A.E.6 has been provided;
  - the *NCP report* has been prepared in accordance with this guideline, and
  - the *NCP report* is a true reflection of the *liable entity's net contract position*.

### 8.1.2 Data file formats and examples

The AER is still developing the IT systems which will receive the *NCP report*. Below are examples of what the AER's current thinking is on the format of these documents. A more detailed format will be outlined when the Interim Contracts and Firmness Guideline is published in August 2019.

#### Example 1 – Summary of net contract position

The rules require that the *liable entity* submit a *net contract position* for each *gap trading interval*. The *net contract position* is a MW value assigned to each trading interval within the gap period. The *liable entity* must also submit the expected maximum demand for the *gap trading intervals* based on its *net contract position* for those intervals (without taking into consideration any demand response arrangements). The expected maximum demand is the *liable entity's* likely share of the system *one-in-two year peak demand* at the time of the reliability gap.

Both the *net contract position* and the expected maximum demand may be submitted in the same CSV file.

Submitted as a CSV file.

**Table 8.2 Summary of net contract position**

Gap	Trading interval	Net contract position (MW)	Expected maximum demand (MW)
NSW22A01	19/01/2022 17:30	640	630
NSW22A01	19/01/2022 18:00	640	632
NSW22A01	19/01/2022 18:30	640	639
NSW22A01	19/01/2022 19:00	650	644
NSW22A01	19/01/2022 19:30	650	643
NSW22A01	19/01/2022 20:00	640	635

### Example 2 – Reporting of grouped qualifying contracts (CSV)

The rules require each *qualifying contract* to be listed in the *NCP report*, along with the associated MW value and firmness factor. *Standard qualifying contracts* that cover multiple *gap trading intervals*, and have the same firmness factor may be grouped together to reduce reporting burden.

A contract which increases the *liable entity's* exposure to spot market risk is listed as a negative MW value in the *NCP Report*. A contract which reduces a *liable entity's* exposure to spot market risk is listed as a positive MW value.

Submitted as CSV file.

**Table 8.3 Reporting of grouped qualifying contracts**

Gap	Contract	No. of contracts	Contract start trading interval	Contract end trading interval	Unadjusted MWs	Firmness factor	Firmness adjusted MWs	Contract type
NSW22A01	Quarterly base swap (bought)	85	01/01/2022 00:30	01/04/20 22 00:00	85	1	85	Standard qualifying contract
NSW22A01	\$300/MWh quarterly swap (sold)	12	01/01/2022 00:30	01/04/20 22 00:30	-12	1	-12	Standard qualifying contract

### Example 3 – Reporting of contracts by trading interval

If the firmness factor differs based on the *gap trading interval*, each *gap trading interval* for each contract must be reported separately. Table 8.3 shows an example of this for a solar PPA contract.

Submitted as CSV file.

**Table 8.4 Reporting of contracts by trading interval**

Gap	Contract	Contract type	Trading interval	Unadjusted MWs	Firmness factor	Firmness adjusted MWs
NSW22A01	Solar PPA	Standard qualifying contract	19/01/2022 17:30	10	0.95	9.5
NSW22A01	Solar PPA	Standard qualifying contract	19/01/2022 18:00	10	0.82	8.2
NSW22A01	Solar PPA	Standard qualifying contract	19/01/2022 18:30	10	0.74	7.4
NSW22A01	Solar PPA	Standard qualifying contract	19/01/2022 19:00	10	0.41	4.1
NSW22A01	Solar PPA	Standard qualifying contract	19/01/2022 19:30	10	0.02	0.2
NSW22A01	Solar PPA	Standard qualifying contract	19/01/2022 20:00	10	0	0

### Example 4 – Reporting of bought load following contracts (CSV or PDF)

The buyer of a load following contract will not submit a MW volume for the contract in their *NCP report*. They must submit any contract specifications required so that the AER can carry out these calculations. The example in table 8.4 below shows a load following contract which covers 100% of the *liable entity's* load.

Submitted as CSV or PDF file.

**Table 8.5 Reporting of bought load following contracts**

Gap	Contract	Contract start trading interval	Contract end trading interval	% of load covered	Firmness factor
NSW22A01	Load following contract A	1/01/2022 0:30	1/04/2022 00:00	100	1.0

**Example 5 – Reporting of NMIs for demand response contract (CSV)**

The AER requires a *liable entity* to submit a list of all NMI's associated with each demand response contract in their *NCP report*.

Submitted as CSV file.

**Table 8.6 Reporting of NMIs for demand response contracts**

Gap	Contract	NMI
NSW22A01	Demand response contract A1	19738920791
NSW22A01	Demand response contract A2	97392775297
NSW22A01	Demand response contract A2	93872840285
NSW22A01	Demand response contract A2	92749178204
NSW22A01	Demand response contract A3	19382749204
NSW22A01	Demand response contract A3	99726482617

**8.1.3 Submission of net contract report to the AER**

The AER will provide means for *liable entities* to submit their *NCP report* electronically. The process for submission has not yet been developed, though is likely to be through a portal on the AER's website.

**8.2 Adjustments to net contract position**

A *liable entity's net contract position* is locked in at *reporting day*. There are four categories of permitted adjustments to the *net contract position*. If such a change occurs between T-1 and T, a *liable entity* may apply to the AER for an adjustment. The *liable entity* must submit an updated *NCP report* for the region in which the change occurs.

4A.E.7(b) of the rules specifies that permitted adjustments to the *NCP report* can occur if, after the *position day*, any of these 5 conditions are met.

- (1) the number of *connection points* for *small customers* in the *region* for which the *liable entity* is *financially responsible* changes such that the *liable entity's* expected maximum demand reported in its *NCP report* will increase by more than 10%;

(2) the number of *connection points* for *large customers* (who are below the *opt-in customer threshold*) in the *region* for which the *liable entity* is *financially responsible* changes such that the *liable entity's* expected maximum demand reported in its *NCP report* will increase by more than 1%;

(3) the *liable entity* becomes *financially responsible* for a new *connection point* established after the *position day* where the *large customer* at that *connection point* is at or above the *opt-in customer threshold* such that the *liable entity's* expected maximum demand reported in its *NCP report* will increase by more than 1%;

(4) a *liable entity* is transferred *retail customers* in the *region* in its capacity as a *RoLR*; or

(5) if the *liable entity* is an *opt-in customer*, that *liable entity's* expected maximum demand reported in its *NCP report* will increase by more than 1%.

A *liable entity* may only seek permitted adjustments to the *net contract position* to the extent necessary to accommodate the increase in load. For the purposes of determining whether the adjustment threshold has been satisfied and a net contract adjustment permissible, a *liable entity's net contract position* at T-1 is used to determine the *liable entity's* forecast demand.

When determining whether a relevant percentage has been reached small customers shall be counted together in one group, large customers shall be counted together in another group and ROLR customers shall be counted in a third group. It is possible for a *liable entity* to reach the relevant percentage for a group of customers on multiple occasions between T-1 and T, and each time the *liable entity* may apply to the AER to adjust its *net contract position*.

#### **Small Customers:**

The increase in small customer load must result in the total forecast demand of that *liable entity* increasing by at least 10% to qualify for an adjustment to the *NCP report*. The *liable entity* must demonstrate to the AER that its forecast retail load has increased its total demand by at least 10% since *reporting day*.

#### **Large Customers:**

The increase in large customer load must result in the total forecast demand for the *liable entity* increasing by at least 1% to qualify for an adjustment to the *NCP report*. A large customer may be counted for an adjustment to *net contract position* if the customer meets the definition of large customer under the National Energy Retail Law and is below the *opt-in customer threshold* defined in the rules 4A.D.6.

The definition of large customer taken from the National Energy Retail Law is a business customer who consumes energy at business premises at or above the upper consumption threshold. The upper consumption thresholds are currently 100MWh in all regions except SA where the threshold is 160MWh. The *opt-in customer threshold* defined in the rules is an annual *peak demand* for a connection point is equal to or greater than 30MW.

The *liable entity* may group together large customers and assess the total change in load against the total forecast demand to assess if they meet the 1% threshold.

### **RoLR Customers:**

If a *liable entity* is transferred retail customers in the region of the gap in its capacity as RoLR, the *liable entity* can increase their forecast demand and *net contract position* by the load of the RoLR customers. There is no threshold to meet in this clause so any increase in load as the result in gaining customers through RoLR is classed as a permitted adjustment.

### **Opt-in Customers:**

The increase in demand for an *opt-in customer* must result in the expected maximum demand of that *liable entity* increasing by at least 1% to qualify for an adjustment to the *NCP report*. The *liable entity* must demonstrate to the AER that its expected maximum demand has increased by at least 1% since *reporting day*.

## **8.2.1 Application to AER to adjust net contract position**

A *liable entity* may apply to the AER to adjust their *net contract position* if they can satisfy the adjustment conditions in section 8.2 of the guideline above. The application must be made to the AER on or before *reporting day*. An application must be submitted to the AER electronically.

(1) The *liable entity's* revised *NCP report*, including the adjusted *net contract position*.

The *NCP report* must be in the format specified in section 8.1 of this guideline. The entire *NCP Report* must be submitted not just the amended section.

(2) Information justifying the basis of the adjustment to the *net contract position*. *Liable entities* must provide documentation supporting the increase in demand forecast has satisfied the conditions in section 8.2 of this guideline.

The AER will approve or reject an application to adjust *net contract position* based on the threshold criteria set out in section 8.2 of this guideline. The onus is on the *liable entity* to provide sufficient supporting information to satisfy the AER that their demand increase has reached the specified thresholds. The AER has access to weekly NMI data which it may use to verify the application has met the thresholds.

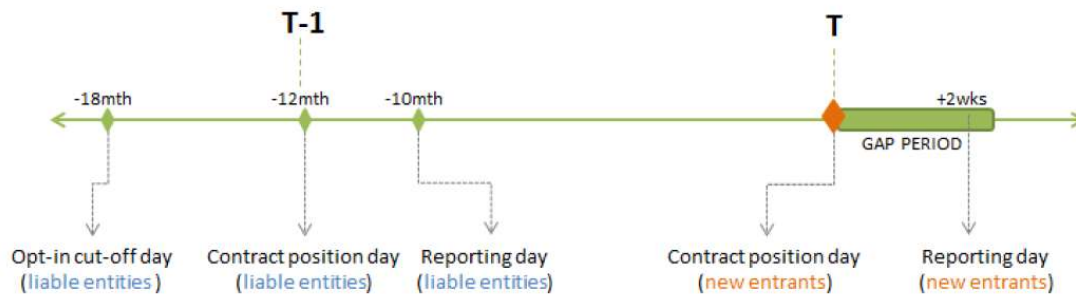
If the AER approves the application, the adjusted *net contract position* is taken to be the *liable entity's net contract position* as at the date of the AER's notification of its approval. The AER will notify the *liable entity* in writing within 30 business days that their application has been approved.

If the AER rejects an application to adjust the *net contract position*, it will provide written reason to the applicant for its rejection within 30 business days of submission. The AER may approve an alternative adjustment to the *liable entity's net contract position* which the AER considers is consistent with the criteria specified in section 8.2.

## 9 New entrant

The Rules 4A.D.3 states that a *new entrant* for a region is a person who meets the following 3 criteria:

- (a) is a *Market Customer* for a connection point in that *region* at the end of the *new entrant contract position day*
- (b) was not a *liable entity* for that region at the end of the *contract position day*
- (c) the aggregate of all loads at the connection points in that region for which it is a *Market Customer* at the end of the *new entrant contract position day* exceeds, or is expected to exceed, 10 GWh per annum



On the *new entrant contract position day*, *new entrants* must have a *net contract position* for the *reliability gap period* that is sufficient to cover their RRO obligation. *New entrants* must report their *net contract position*, as at the *new entrant contract position day*, to the AER on the *new entrant reporting day*. Refer to section 8.1 which outlines the format the *NCP report* must take.

The rules define the *new entrant contract position day* as the first day of a *forecast reliability gap period*, unless an alternative date is stated in a *T-1 reliability instrument*. *New entrant reporting day* is the day stated in the *reliability instrument*, and must not fall within 10 business days of the *new entrant contract position day*.

Non-market customers that enter the market after the *contract position day* are not eligible to opt-in and are not required to take steps to comply with the retailer reliability obligation.

## 9.1 New entrant threshold

A new *Market Customer*<sup>30</sup> must comply with the RRO if the aggregate of all loads at the connection points in that region at the end of the *new entrant contract position day* exceeds, or is expected to exceed, 10GWh per annum. The Rules refer to these entities as *new entrants*.<sup>31</sup>

### Our approach:

A *new entrant* will, by definition, have existed for less than 12 months at *new entrant contract position day*. They will have less than 12 months of historical demand on which to calculate their annual demand. Consequently, *Market Customers* will need to estimate some or all of their demand to determine whether they are considered *new entrants*, and are subject to the RRO.

To assess if the *Market Customer* meets the 10GWh per annum threshold (and are considered a *new entrant*), annual consumption must be estimated from *actual demand* data, using:

- *actual demand* for the period in which the *Market Customer* has operated at the relevant connection point;
- an estimate of demand for the remainder of the year, based on a straight-line expansion of observed *actual demand*;
- an adjustment for any reasonable growth expectations over the remainder of the year.

If the *Market Customer* does not have any *actual demand* data to base it must make its best estimate of annual demand based on its customers' historical demand and any reasonable expectation of growth.

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<sup>30</sup> A *Market Customer* who was not a *liable entity* at the end of the *contract position day*, but was a *Market Customer* at the end of the *new entrant contract position day*.

<sup>31</sup> Rule 4A.D.3 of the NER

## 10 Notification of compliance trading intervals

Rule 4A.F.4 states that AEMO must provide written notice to the AER stating whether or not there were any compliance trading intervals, and if so which *gap trading intervals* are a compliance trading interval. AEMO must provide this written notice to the AER within 15 business days of the end of the *reliability gap period*. AEMO must publish a notice on its website within 5 business days of submitting it to the AER.

### **Our approach**

When providing this information AEMO must specify the following:

- The *reliability instrument* to which the compliance trading intervals relate
- The date and time of each compliance trading interval
- *Actual demand* and *one in two year peak demand forecast*

AEMO must provide this information electronically to the AER.

## 11 AEMO compliance report

Rule 4A.F.5 states that if AEMO has provided notice of compliance trading intervals to the AER under 4A.F.5 (see section 10), within 40 weeks after the end of the *reliability gap period* AEMO must provide the AER each *liable entity's* share for each compliance trading interval.

### Our approach

For each compliance trading interval AEMO must specify the following information to the AER:

- The *reliability instrument* to which the compliance trading intervals relate
- The date and time of each compliance trading interval
- *Liable entity's* details (registered name, participant ID, ABN)
- *Liable entity's share* in each compliance trading interval
- Any adjustment to a *liable entity's* share (for example a demand response contract that has been added back).

AEMO must provide this information electronically to the AER.