



# Reserve Contract (Long Notice)

Australian Energy Market Operator Limited

and

[name]

**Drafting Note: If a reserve provider is providing different types of long notice reserve – i.e. scheduled generation, scheduled load reduction, unscheduled generation, unscheduled load reduction – a different contract will be needed for each type and the schedules and annexures that are not relevant to that type will be deleted)**

Australian Energy Market Operator Limited  
Level 22, 530 Collins Street  
MELBOURNE VIC 3000  
TEL: 03 9609 8000

# Reserve Contract (Long Notice)

## Contents

<b>Details</b>		<b>4</b>
<b>Operative Provisions</b>		<b>5</b>
<b>1</b>	<b>Interpretation and Incorporation of Schedules</b>	<b>5</b>
1.1	Definitions	5
1.2	Interpretation	7
1.3	Construction	8
1.4	Symbols	8
1.5	Schedules	8
1.6	Priority	8
1.7	<i>Rules prevail</i>	8
<b>2</b>	<b>Conditions Subsequent</b>	<b>8</b>
2.1	Conditions	8
2.2	Fulfilment of Conditions	9
2.3	Updates	9
2.4	Waiver of condition subsequent	9
2.5	Conditions Subsequent Fulfilment Date	9
2.6	Effect of Termination	9
2.7	Survival	9
<b>3</b>	<b>Term</b>	<b>9</b>
3.1	Term	9
3.2	Expiry of RERT scheme	<b>Error! Bookmark not defined.</b>
<b>4</b>	<b>Appointment</b>	<b>9</b>
4.1	Appointment and Acceptance	9
<b>5</b>	<b>Provision of Reserve</b>	<b>9</b>
5.1	Reserve	9
5.2	Reserve Provider Undertakings	10
5.3	Requests for Reserve	10
5.4	Unavailability of Reserve	10
5.5	Spot Market Transactions	10
5.6	Third party reserve	10
<b>6</b>	<b>Measurement and verification</b>	<b>10</b>
6.1	Measurement	10
6.2	Verification	10
<b>7</b>	<b>Records, audits and inspections</b>	<b>11</b>
7.1	Type of Records	11
7.2	Form and Retention	11
7.3	Right to Inspect Records	11
7.4	Audits by AEMO	11
7.5	Conduct of Audit	11
7.6	Inspections	11
7.7	Conduct of Inspection	12

<b>8</b>	<b>Maintenance &amp; Repairs</b>	<b>12</b>
8.1	Maintenance of Reserve Equipment	12
8.2	Notice of Modifications to Reserve Equipment	13
8.3	Ad Hoc Maintenance & Repairs	13
<b>9</b>	<b>Payments</b>	<b>14</b>
9.1	Calculation of Payments	14
9.2	Final Statements	14
9.3	Disputes over Statements	14
9.4	Payment	14
9.5	Adjustment	14
9.6	Set-Off	15
9.7	GST	15
<b>10</b>	<b>Extent of liability</b>	<b>16</b>
10.1	AEMO Liability cap	16
10.2	Reserve Provider Liability Cap	16
10.3	Indemnity	16
10.4	National Electricity Law	16
10.5	Civil Liability Act 2002	17
<b>11</b>	<b>Force majeure</b>	<b>17</b>
11.1	Effect on performance of obligation	17
11.2	Obligation to Notify	17
11.3	Obligation to mitigate	17
<b>12</b>	<b>Termination</b>	<b>17</b>
12.1	Termination for default	17
12.2	Termination by AEMO	18
12.3	Termination for convenience	18
12.4	Termination Notices	18
12.5	Survival	18
12.6	Reduction of Reserve	18
12.7	No other termination	18
<b>13</b>	<b>Assignment and sub-contracting</b>	<b>19</b>
13.1	Assignment	19
13.2	Sub-contracting	19
<b>14</b>	<b>Dispute resolution</b>	<b>19</b>
<b>15</b>	<b>Warranties</b>	<b>20</b>
<b>16</b>	<b>Compliance with Legislation and the Requirements of an Authority</b>	<b>21</b>
<b>17</b>	<b>General</b>	<b>21</b>
17.1	Notices	21
17.2	Exercise of Rights	22
17.3	No Waiver or Variation	22
17.4	Amendment	22
17.5	Approvals and Consents	22
17.6	Continuing Indemnities	22
17.7	Payment not necessary before Claim	22
17.8	Costs and Expenses	23

17.9	Further Assurances	23
17.10	Supervening Legislation	23
17.11	Severability	23
17.12	Entire Agreement	23
17.13	Confidential Information	23
17.14	No other representations or warranties	23
17.15	Counterparts	23
17.16	Governing Law & Jurisdiction	24
17.17	No partnership, agency or trust	24
	<b>Schedule 1 –Scheduled Reserve (Generation Increase)</b>	<b>25</b>
	<b>Annexure to Schedule 1 - Conditions Subsequent</b>	<b>36</b>
	<b>Schedule 2 –Scheduled Reserve (Load Reduction)</b>	<b>37</b>
	<b>Annexure to Schedule 2 - Conditions Subsequent</b>	<b>49</b>
	<b>Schedule 3 –Unscheduled Reserve (Generation Increase)</b>	<b>50</b>
	<b>Annexure to Schedule 3 - Conditions Subsequent</b>	<b>60</b>
	<b>Schedule 4 –Unscheduled Reserve (Load Reduction)</b>	<b>61</b>
	<b>Annexure to Schedule 4 - Conditions Subsequent</b>	<b>74</b>
	<b>Signing page</b>	<b>79</b>

# Reserve Contract (Long Notice)

## Details

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<b>Parties</b>		
<b>AEMO</b>	Name	<b>AUSTRALIAN ENERGY MARKET OPERATOR LIMITED</b>
	ABN	94 072 010 327
	Address	Level 22, 530 Collins Street, Melbourne, Victoria
	Telephone	(03) 9609 8000
	Email	James.lindley@aemo.com.au
	Attention	James Lindley, Group Manager Systems Capability

---

<b>Reserve Provider</b>	Name	
	ABN	
	Address	
	Telephone	
	Email	
	Attention	

---

<b>Recitals</b>	<b>A</b>	<i>AEMO is responsible for managing the National Electricity Market in accordance with the Rules.</i>
	<b>B</b>	<i>AEMO has selected the Reserve Provider for the provision of long notice reserve.</i>
	<b>C</b>	<i>This Agreement sets out the terms and conditions for for the provision of long notice reserve.</i>

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<b>Governing law</b>	New South Wales
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<b>Date of Agreement</b>	See signing page
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<b>reserve period</b>	<b>1 November 2019 to 31 March 2020<sup>1</sup></b>
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<sup>1</sup> These are indicative only and are not a fixed or final and are for the purposes of determining what may be available (including by way of RERT). Closer to summer, before contracting for reserve, AEMO would re-run our models to determine what and when reserve is reasonably needed to meet the reliability standard.

# Reserve Contract (Long Notice)

## Operative Provisions

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### 1 Interpretation and Incorporation of Schedules

#### 1.1 Definitions

Unless a contrary intention appears, these meanings apply in this document:

“*authority*” means any Commonwealth, State, Territory or local government or regulatory department, body, instrumentality, minister, agency or other authority, but does not include *AEMO*.

“*availability charge*” is specified in **Item 8** of the **Schedule** as amended in accordance with this Agreement.

“*available*” means, in respect of each *reserve* at any time, that the *reserve* is, or under this Agreement is taken to be, capable of being provided by the *Reserve Provider* at all of the *contracted levels of performance*.

“*billing period*” means a period of 7 days commencing with the *trading interval* ending at 00:30 hours (*Eastern Standard Time*) on Sunday, provided that:

- (a) the first *billing period* commences when the *reserve period* commences; and
- (b) the last *billing period* ends when the *reserve period* ends.

“*charges*” means the *availability charge*, *usage charge*, *pre-activation charge* or *early termination charge*, as applicable.

“*claims*” means all claims, losses, liabilities, costs or expenses, whether arising in contract, tort (including negligence), equity or otherwise.

“*commencement date*” means the date this Agreement comes into effect under **clause 3.1**.

“*communication*” means any notice, demand, approval, consent, request or other communication required or given by a party to another party under this Agreement.

“*conditions subsequent fulfilment date*” for each *condition subsequent* is specified in the **Annexure** to the **Schedule**.

“*conditions subsequent*” for the *reserve* are specified in the **Annexure** to the **Schedule**.

“*contracted levels of performance*” are specified in **Item 5** of the **Schedule**.

“*Corporations Act*” means the Corporations Act 2001 (Cth).

“*datastream*” means a stream of *metering data* associated with a *connection point* as represented by a *NMI*. A *NMI* can have multiple *datastreams* (e.g. from one or more meters, or from one or more channels or registers that comprise a single meter).

“*datastream suffix*” means the unique suffix which identifies a *datastream* and which is associated with the *NMI* to which it belongs.

“*dispose*” means assign, transfer or otherwise dispose of any legal or equitable estate, whether by sale, lease, declaration or creation of trust or otherwise.

“*early termination charge*” is specified in **Item 8** of the **Schedule**.

“*EST*” means *Eastern Standard Time*.

“*event of force majeure*” means in respect of a party (in this definition called the “*affected party*”) an act of God, lightning strike, earthquake, flood, drought, storm, tempest, mudslide, explosion, fire or any other natural disaster, an act of war, act of public enemies or terrorists, riot, civil commotion,

malicious damage, sabotage, blockade or revolution, an act or omission of any *authority*, or a *labour dispute*, that:

- (a) is beyond the reasonable control of the *affected party*;
- (b) is not the result of a breach of this Agreement, *legislation* or the *Rules* by the *affected party*, or of an intentional or negligent act or omission of the *affected party* (or of any other person over which the *affected party* should have exercised control); and
- (c) results in the *affected party's* being unable to observe or perform on time and as required any obligation (other than an obligation to pay money) under this Agreement.

For the avoidance of doubt, the inability of a *generating unit* comprising the *reserve equipment* to supply electricity to the *regional reference node* in the *region* where the *reserve* is or may be required due to a *constraint* on a *network* is not an *event of force majeure*.

“*first stage dispute resolution processes*” means the procedures set out in Rule 8.2.4.

“*GST*” has the meaning given to it in the *A New Tax System (Goods and Services Tax) Act 1999* (Cth).

“*insolvency event*” means, in relation to a party, the happening of any of these events:

- (a) it is (or states that it is) insolvent or under administration; or
- (b) it has a controller (as defined in the *Corporations Act*) appointed, is in liquidation, in provisional liquidation, under administration or wound up or has had a receiver (or receiver and manager) appointed to any part of its property;
- (c) it is subject to any arrangement, assignment, moratorium or composition, protected from creditors under any statute or dissolved (in each case, other than to carry out a reconstruction or amalgamation while solvent on terms approved by the other party);
- (d) an application or order has been made (and, in the case of an application, it is not stayed, withdrawn or dismissed within 30 days), resolution passed, proposal put forward, or any other action taken, in each case in connection with that party, which is preparatory to or could result in any of the events detailed in **paragraphs (a), (b) or (c)**;
- (e) it is otherwise unable to pay its debts when they fall due; or
- (f) something having a substantially similar effect to the events detailed in **paragraphs (a) to (e)** happens in connection with that party under the law of any jurisdiction.

“*labour dispute*” means a strike, lockout, ban, “go-slow” activity, stoppage, restraint of labour or other similar act that is not directed primarily at a party to this Agreement.

“*legislation*” means Acts of Parliament, regulations, statutory instruments and codes, and includes any licence, order, official policy, directive, request, requirement or guideline of an *authority* whether or not it has the force of law.

“*long notice reserve*” means the provision of *reserve* in response to a ‘long-notice situation’, as that term is described in the *RERT guidelines*.

“*minimum technical requirements*” are specified in **item 5.1** of the **Schedule**.

“*pre-activation charge*” is specified in **Item 8** of a **Schedule** providing for *unscheduled reserve*.

“*representative*”, in relation to a party, means any officer, employee, agent, adviser, trustee, permitted assignee, liquidator, administrator, or third party contractor of that party or of a related body corporate (as that term is defined in the *Corporations Act*) of that party.

“*reserve*” is described in **item 2** of the **Schedule** as amended in accordance with this Agreement.

“*reserve equipment*” means any equipment specified in **Item 2.2** of the **Schedule** (other than those Schedules providing for *reserve* through the reduction of *load*) and, in respect of *reserve* through the reduction of *load*, any equipment used to provide the *reserve* including any *standby generating unit*.

“*reserve period*” means the period for which *reserve* is contracted under this Agreement as specified in the **Details**.

“*Reserve Provider*” is specified in the **Details**.

“*Rules*” means the National Electricity Rules.

“*second stage dispute resolution processes*” means the procedures set out in Rule 8.2.5.

“*standby generating unit*” means a *generating unit* that is not *connected* to the *network* and will *generate* in order for the *Reserve Provider* to provide the *reserve*.

“*term*” means the period during which this Agreement is in effect.

“*usage charges*” are specified in **item 8** of the **Schedule**.

“*Web Portal*” means the Reserve Trading (RERT) web portal accessible through AEMO market systems established by AEMO to allow reserve providers to confirm *available reserve* and provide *NMI* information and other functions.

All terms in italics not defined in this Agreement have the meaning given to that term in the *Rules*.

## 1.2 Interpretation

Unless a contrary intention appears in this document, a reference to:

- (a) this Agreement includes any schedules and annexures;
- (b) a document (including this Agreement) includes the document as novated, varied, or replaced, and despite any change in the identity of the parties;
- (c) a clause, paragraph, schedule, or annexure is a reference to a clause, paragraph, schedule, or annexure to this Agreement;
- (d) a clause is a reference to all its subclauses;
- (e) an “Item” is a reference to a provision in a **Schedule**;
- (f) legislation includes subordinate legislation and other instruments under them, and consolidations, amendments, re-enactments or replacements of any of them;
- (g) the word “**Rule**” followed by a number refers to provisions in the *Rules*;
- (h) the singular includes the plural and vice versa and a gender includes all genders;
- (i) the word “**person**” includes a firm, a body corporate, a partnership, joint venture, trust, an unincorporated association and any *authority* and any successor entity to those persons;
- (j) the word “**includes**” or “**including**” or “**such as**” are not words of limitation, and when introducing an example, do not limit the meaning of the words to which the example relates to examples of a similar kind;
- (k) a person includes a reference to the person’s executors, administrators, successors, substitutes (including persons taking by novation) and assigns;
- (l) a party includes, where the context requires it, that person’s directors, officers, employees, contractors, agents and any other persons authorised by that party;
- (m) an agreement, representation or warranty:
  - (i) in favour of two or more persons is for the benefit of them jointly and each of them severally;
  - (ii) by two or more persons binds them jointly and each of them severally;
- (n) a thing (including an amount) is a reference to the whole and each part of it and a reference to a group of persons is a reference to all of them collectively, to any two or more of them collectively, and to each of them individually;



- (o) writing includes any mode of representing or reproducing words in tangible and permanently visible form;
- (p) a month is a reference to a calendar month;
- (q) a day is a reference to a period of time commencing at midnight and ending the following midnight; and
- (r) a period of time and the period dates from a given day or the day of an act or event, it is to be calculated exclusive of that day and, if a period of time is specified as commencing on a given day or the day of an act or event, it is to be calculated inclusive of that day.

**1.3 Construction**

- (a) Headings are inserted for convenience and do not affect the interpretation of this Agreement.
- (b) If a word or phrase is defined in this Agreement, other parts of speech and grammatical forms of that word or phrase have corresponding meanings.
- (c) No rule of construction will apply to a clause to the disadvantage of a party merely because that party put forward the clause or would otherwise benefit from it.

**1.4 Symbols**

A symbol in column 1 of the table below has the meaning set out opposite that symbol in column 2:

1	2
SYMBOL	MEANING
MW	Megawatt
MWh	Megawatt hour
\$	Australian dollars

**1.5 Schedules**

If a **Schedule** contains any provisions that impose additional obligations to those set out in the **Operative Provisions**, the provisions in the **Schedule** apply as if the provision was an **Operative Provision**.

**1.6 Priority**

To the extent of any inconsistency a **Schedule** prevails over the **Operative Provisions**

**1.7 Rules prevail**

If, and to the extent of, any inconsistency between an obligation of *AEMO* under this Agreement and an obligation of *AEMO* under the *Rules*, the obligation of *AEMO* under the *Rules* will prevail over the obligation of *AEMO* under this Agreement.

**2 Conditions Subsequent**

**2.1 Conditions**

Except for those in **clauses 3.1**, Error! Reference source not found., **7, 10, 13, 14, 15, 16** and **17** all of the parties' rights and obligations in respect of a *reserve* under this Agreement are subject to the *conditions subsequent* applicable to that *reserve*.

## 2.2 Fulfilment of Conditions

The *Reserve Provider* must use reasonable endeavours to fulfil or procure the fulfilment of the *conditions subsequent* by the *conditions subsequent fulfilment date*.

## 2.3 Updates

Until a *condition subsequent* is fulfilled, the *Reserve Provider* must provide *AEMO* with weekly updates on the status of the fulfilment of each *condition subsequent*, including the anticipated date each *condition subsequent* will be fulfilled.

## 2.4 Waiver of condition subsequent

Each *condition subsequent* is for the sole benefit of *AEMO* and can only be waived by *AEMO* in whole or in part with or without conditions.

## 2.5 Conditions Subsequent Fulfilment Date

If any *condition subsequent* is not fulfilled by the *condition subsequent fulfilment date* or waived in accordance with **clause 2.4**, *AEMO* may terminate this Agreement by giving the *Reserve Provider* 3 *business days*' notice.

## 2.6 Effect of Termination

If this Agreement is terminated under **clause 2.5**, this Agreement is of no further effect and the parties are released from any further obligation under this Agreement but they remain liable for any breach committed before that termination.

## 2.7 Survival

If this Agreement is terminated under **clause 2.5**, **clause 2.6** does not affect the rights and obligations of the parties under **clauses 10, 14, 16 and 17**.

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## 3 Term

### 3.1 Term

- (a) This Agreement comes into effect at the time when the last party to execute this Agreement does so.
- (b) Subject to **clause** Error! Reference source not found. and to earlier termination in accordance with this Agreement, this Agreement continues until midnight at the end of the day that is 9 months after the *commencement date*.

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## 4 Appointment

### 4.1 Appointment and Acceptance

*AEMO* appoints the *Reserve Provider* for provision of *long notice reserve* in accordance with this Agreement and the *Reserve Provider* accepts that appointment.

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## 5 Provision of Reserve

### 5.1 Reserve

- (a) The *Reserve Provider* must ensure that the reserve is *available* at all times during the *reserve period*.
- (b) The *Reserve Provider* must provide to *AEMO* the *reserve* in accordance with this Agreement.
- (c) The *Reserve Provider* must ensure that the *reserve* is *available* and provided at the relevant *contracted levels of performance* and with due care and skill.

## 5.2 Reserve Provider Undertakings

Except in accordance with this Agreement, the *Reserve Provider* undertakes that the *reserve* to be provided to AEMO under this Agreement will not be:

- (a) the subject of any *dispatch offers* or *dispatch bids*;
- (b) offered to the *market* through any other means;
- (c) provided or available to be provided pursuant to any other arrangement or agreement, including any demand side management arrangement or agreement,

during the *reserve period*.

## 5.3 Requests for Reserve

- (a) During the *reserve period*, AEMO may (but is not obliged to) request the *reserve* be provided by the *Reserve Provider* in accordance with **item 6** of the **Schedule**.
- (b) The *Reserve Provider* must comply with a request under **paragraph (a)**.

## 5.4 Unavailability of Reserve

If, at any time, the *Reserve Provider* considers that *reserve equipment* is, or will become, incapable of providing *reserve* in accordance with the *contracted levels of performance*, it must notify AEMO immediately specifying:

- (a) which *reserve* the notice applies to;
- (b) when the *reserve equipment* became, or will become, incapable of providing the *reserve*;
- (c) how long the *Reserve Provider* expects the incapability to continue; and
- (d) the cause of the incapability.

## 5.5 Spot Market Transactions

Neither the *Reserve Provider*, nor any other party, will be entitled to *spot market* revenue associated with the provision of *reserve*. If requested by AEMO, the *Reserve Provider* will participate in the *spot market* as AEMO's agent and account to AEMO for any *spot market* revenue associated with the *reserve*, or AEMO may set off that *spot market* revenue against an amount due to the *Reserve Provider* under this Agreement.

## 5.6 Third party reserve

The *Reserve Provider* must obtain written confirmation from each third party and end user contracted by the *Reserve Provider* to provide *load reduction* or *generation increase* for the purpose of the *Reserve Provider* providing *reserve* under this Agreement confirming that the *load reduction* or *generation increase* is not and will not be:

- (a) offered to the *market* through any other means;
- (b) provided or available to be provided pursuant to any other arrangement or agreement, including any demand side management arrangement or agreement,

during the period for which *reserve* is contracted under this Agreement.

---

# 6 Measurement and verification

## 6.1 Measurement

Measurement of the *reserve* provided under this Agreement must be made in accordance with the **Schedule**, and as provided by AEMO's records and the *Reserve Provider's metering*, measurement, supervisory and electronic data processing systems.

## 6.2 Verification

AEMO may verify that *reserve* is being provided in accordance with this Agreement using the process contemplated by the **Schedule**.

---

## 7 Records, audits and inspections

### 7.1 Type of Records

The *Reserve Provider* must compile and maintain records concerning this Agreement, including the provision of *reserve* under this Agreement, records of electricity supply and demand side management agreements or arrangements or any network support agreements or arrangements affecting the *reserve* including the time, duration, quantity and amount of demand response or other services supplied or activated under any such agreement or arrangement, the operation and maintenance of *reserve equipment*, any procedures used in the performance of this Agreement and all notices given or received in relation to this Agreement including by telephone and SMS.

### 7.2 Form and Retention

- (a) The records referred to in **clause 7.1** may be maintained in writing or electronically.
- (b) The *Reserve Provider* must maintain a record referred to in **clause 7.1** for at least 7 years from the date it was created.

### 7.3 Right to Inspect Records

- (a) AEMO may request a copy of any of the records maintained under **clause 7.1** or any other information in connection with *reserve* at any time.
- (b) The *Reserve Provider* must comply with a request from AEMO under **paragraph (a)** within 5 *business days* of receipt.

### 7.4 Audits by AEMO

- (a) AEMO may audit any of the records maintained under **clause 7.1** by giving the *Reserve Provider* at least 5 *business days'* notice. A notice under this **paragraph (a)** must include the following information:
  - (i) the nature of the audit;
  - (ii) the *reserve* concerned;
  - (iii) the name of any *representative* appointed by AEMO to conduct the audit; and
  - (iv) the date on which the audit will commence.
- (b) Unless the *Reserve Provider* agrees otherwise, an audit under this **clause 7.4** may only occur during normal business hours on a *business day*.
- (c) On request from AEMO, the *Reserve Provider* must procure the disclosure of records and information from any party relating to electricity supply and demand side management agreements or arrangements or any network support agreements or arrangements affecting the *reserve* including the time, duration, quantity and amount of demand response or other services supplied or activated under any such agreement or arrangement and the *Reserve Provider* consents to the disclosure to AEMO of any such records and information.

### 7.5 Conduct of Audit

Audits will occur at the site at which the relevant records are maintained by the *Reserve Provider* and the *Reserve Provider* must provide the *representatives* conducting the audit with all assistance those *representatives* may require to conduct it, including access to all relevant records (including computer records or systems) and any interpretation or explanation required.

### 7.6 Inspections

- (a) At a date and time convenient to both parties, AEMO may inspect any of the *reserve equipment* to determine whether the *Reserve Provider* is complying with this Agreement.
- (b) Where any *reserve equipment* is located on a third party or end user's property, the *Reserve Provider* will use all reasonable endeavours to procure consent for AEMO to inspect such equipment at a date and time convenient to both parties and the end user, such that AEMO

may inspect any of the *reserve equipment* to determine whether the *Reserve Provider* is complying with this Agreement.

- (c) At least 5 *business days* prior to the date on which *AEMO* wishes to make an inspection, *AEMO* must deliver a notice to the *Reserve Provider* detailing the following information:
  - (i) the *reserve equipment* to be inspected;
  - (ii) the *representatives* who will be conducting the inspection on behalf of *AEMO*; and
  - (iii) the date and time when *AEMO* proposes to commence the inspection and the expected date and time when the inspection will conclude.
- (d) The *Reserve Provider* must not unreasonably refuse access and must procure that all necessary third party consents to the access required by *AEMO* to conduct the inspection are secured in time for the inspection to commence as agreed between the parties.
- (e) If *AEMO* conducts an inspection under this **clause 7.6**, the *Reserve Provider* must designate *representatives* to accompany *AEMO's representatives* and answer any questions and assist with the conduct of the inspection.

## **7.7 Conduct of Inspection**

- (a) Unless otherwise agreed by the *Reserve Provider*, an inspection under **clause 7.6** may take as long as reasonably necessary, provided it is no longer than 24 hours. Any agreement to extend the period of the inspection must not be unreasonably withheld, considering the extent of the inspection proposed.
- (c) Whilst carrying out an inspection in accordance with **clause 7.6**, *AEMO* must, and must procure that its *representatives*:
  - (i) not cause any loss or damage to the *Reserve Provider's* assets;
  - (ii) not interfere with the operation of the *Reserve Provider's* business (provided that the inspection itself does not constitute interference);
  - (iii) observe the *Reserve Provider's* requirements relating to occupational health and safety and industrial relations matters that apply to all invitees of the *Reserve Provider*; and
  - (iv) not ask any question or give any direction, instruction, or advice to any *representative* of the *Reserve Provider* other than the *representative* designated by the *Reserve Provider* for this purpose.

---

# **8 Maintenance & Repairs**

## **8.1 Maintenance of Reserve Equipment**

In respect of *reserve equipment* owned, operated or controlled by the *Reserve Provider*, the *Reserve Provider* must maintain the *reserve equipment* in accordance with *good electricity industry practice*.

In respect of *reserve equipment* not owned, operated or controlled by the *Reserve Provider*, the *Reserve Provider* must:

- (a) ensure that each third party and end user contracted by the *Reserve Provider* for the purposes of providing *reserve* maintains the *reserve equipment* applicable to that third party and end user in accordance with *good electricity industry practice*; and
- (b) notify *AEMO* promptly after becoming aware of a change or modification to any *reserve equipment* in a way that affects or could reasonably be expected to affect the ability of that *reserve equipment* to meet the *contracted levels of performance*

## 8.2 Notice of Modifications to Reserve Equipment

In respect of *reserve equipment* owned, operated or controlled by the *Reserve Provider*, the *Reserve Provider* must notify *AEMO* promptly after changing or modifying any *reserve equipment* in a way that affects or could reasonably be expected to affect the ability of that *reserve equipment* to meet the *contracted levels of performance*.

In respect of *reserve equipment* not owned, operated or controlled by the *Reserve Provider*, the *Reserve Provider* must ensure that each third party and end user contracted by the *Reserve Provider* for the purposes of providing *reserve* notifies the *Reserve Provider* as soon as the *reserve equipment* applicable to that third party and end user is, or will become, incapable of providing *reserve* in accordance with the *contracted levels of performance*.

## 8.3 Ad Hoc Maintenance & Repairs

(a) If any maintenance or repair to the *reserve equipment* is required during the *reserve period* that could affect the provision of the *reserve* in accordance with this Agreement, the *Reserve Provider* must notify *AEMO* of the need for that maintenance or repair at least 24 hours before any maintenance or repair occurs. The notice must include the following information:

- (A) the reason for the maintenance or repair;
- (B) the proposed date and time of the maintenance or repair;
- (C) the expected impact of the maintenance or repair on the *reserve* during the maintenance or repair period; and
- (D) the *Reserve Provider's* assessment of the urgency of the maintenance or repair.

(b) The *Reserve Provider* must not commence the proposed maintenance or repair unless *AEMO* agrees that the maintenance or repair take place as proposed.

(c) Despite agreeing to the maintenance or repair, *AEMO* may at any time request the *Reserve Provider* to defer it if *AEMO* considers it is likely that the *reserve* will need to be *activated* or *dispatched* at or about the time of the proposed maintenance or repair. If requested by *AEMO*, the *Reserve Provider* must make a good faith assessment of the risks associated with the deferral of the relevant maintenance or repair in relation to the ability of the *reserve* to meet the *contracted levels of performance* and notify *AEMO* of that assessment as soon as possible.

(d) The *Reserve Provider* must comply with a request by *AEMO* to defer the maintenance or repair, unless, in the *Reserve Provider's* reasonable opinion, damage to the *reserve equipment* is imminent, or the deferral of the maintenance or repair significantly increases the risk of imminent danger to the safety of personnel.

(e) The *Reserve Provider* must notify *AEMO* of any deviation from the advice provided under **paragraph (a)** as soon as possible.

(f) *AEMO* will not be liable to reimburse any costs of the *Reserve Provider* incurred in respect of deferral of maintenance or repair if *AEMO* notifies the *Reserve Provider* of the intended deferral at least 24 hours before the proposed commencement of the maintenance or repair, or within two hours after *AEMO's* receipt of the *Reserve Provider's* notice of the maintenance or repair, whichever is the later.

If *AEMO* gives a notice to defer maintenance or repair at a time that is:

- (a) less than 24 hours prior to the planned commencement of the maintenance or repair; or
- (b) more than two hours after *AEMO's* receipt of the *Reserve Provider's* notice of the maintenance or repair,

whichever is the later:

- (c) the *Reserve Provider* must use reasonable endeavours to defer the maintenance; and
- (d) *AEMO* must reimburse the *Reserve Provider* for any reasonable expenses the *Reserve Provider* incurs that cannot be avoided and are directly attributable to the deferral, upon the *Reserve Provider's* provision of evidence of incurring of the expense.

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## **9 Payments**

### **9.1 Calculation of Payments**

- (a) The charges owed by *AEMO* for reserve provided under this Agreement are to be determined in accordance with item 8 of the Schedule.
- (b) The charges owed by the *Reserve Provider* for failure to provide *reserve* in accordance with this Agreement are to be determined in accordance with item 8 of the Schedule.
- (c) The *Reserve Provider* acknowledges and agrees that:
  - (i) *AEMO* has entered into this Agreement on the basis that the *Reserve Provider* will repay the *availability charge* to *AEMO* in the circumstances contemplated in item 8 of the Schedule;
  - (ii) The *Reserve Provider* is not entitled to the *availability charge* in the circumstances set out in item 8 of the Schedule.;

### **9.2 Final Statements**

- (a) Subject to clause 9.2(b), not later than 60 *business days* after the end of each *billing period*, *AEMO* must give the *Reserve Provider* a final statement stating the net amount payable by one party to the other in respect of that *billing period* ("*final statement*").
- (b) *AEMO* is not required to give the first *final statement* under this Agreement until the end of the first *billing period* after the *conditions subsequent* have been satisfied or waived in accordance with this Agreement.

### **9.3 Disputes over Statements**

- (a) Disputes in relation to a *final statement* must be raised within 6 months of the date of the *billing period* to which the statement relates. If a party does not raise a dispute within that period, the party will be taken to have agreed to the way in which that matter is dealt with in the *final statement*.

### **9.4 Payment**

If a *final statement* indicates that a party must pay the other party a net amount, that party must pay the net amount specified in the *final statement* to the other party (whether or not there is a dispute in relation to the amount payable) on the later of:

- (a) the 20<sup>th</sup> *business day* after the end of the *billing period*; and
- (b) the 2<sup>nd</sup> *business day* after *AEMO* gives the *final statement*.

### **9.5 Adjustment**

- (a) Where the parties agree that the *charges* or any other amounts specified in a *final statement* are incorrect, or it is determined in accordance with **clause 14** that they were incorrect or not payable, or the quantity of *reserve* or the *availability charge* is amended in accordance with this Agreement, *AEMO* must issue a replacement statement for the *billing period* stating the correct *charges* or any other amounts payable.
- (b) If a payment has already been made, the party advantaged must pay the other party the amount required to put the other party in the position it would have been in at the time payment was due under **clause 9.4** plus interest on the difference between the amount paid to the party advantaged and the amount that should have been paid. The interest accrues

daily at the *bank bill rate* on the relevant day for each day from the date on which payment was made under **clause 9.4** until payment is made under this **paragraph (b)**.

- (c) Payment under **paragraph (b)** must be made on the same day as the next payment is made under **clause 9.4** or set off against an amount due to the party advantaged by the other party, or if no subsequent payments are to occur under **clause 9.4**, within 15 *business days* after the replacement statement is given under **paragraph (a)**.

#### 9.6 Set-Off

- (a) Without limiting AEMO's rights under this Agreement or at law, AEMO may deduct from any money due to the *Reserve Provider* under this Agreement any sum that is payable by the *Reserve Provider* to AEMO whether or not:
- (i) AEMO's right to payment arises by way of damages, debt, restitution or otherwise; or
  - (ii) the factual basis giving rise to AEMO's right to payment arises out of this Agreement, any other agreement, or is independent of any agreement.
- (b) If the money payable to the *Reserve Provider* under this Agreement is insufficient to discharge the liability of the *Reserve Provider* to pay AEMO the amount under **paragraph (a)**, the excess will be a debt due and payable and AEMO may have recourse to any payments due to the *Reserve Provider* other than under this Agreement. Nothing in **clause 9.6** affects AEMO's rights to recover from the *Reserve Provider* such money, or any balance that remains owing.

#### 9.7 GST

- (a) The *charges* and any other amounts payable to or by AEMO under this Agreement exclude GST.
- (b) Where a party is required under this Agreement to reimburse or otherwise pay an amount to another party ("*reimbursed party*") on account of a cost or expense incurred by that *reimbursed party*, the amount of the reimbursement will be reduced by the amount of any *input tax credit* to which the *reimbursed party* is entitled for an acquisition to which that cost or expense relates.
- (c) If either party makes a *taxable supply* under this Agreement, the party receiving the *taxable supply* must also pay an additional amount equal to the consideration payable for the *supply* multiplied by the applicable GST rate.
- (d) AEMO must include the additional amounts contemplated under **paragraph (c)** in statements issued under this Agreement and each party must assist the other party to claim *input tax credits* for GST where relevant.
- (e) If the additional amount paid or payable to a party in respect of a *taxable supply* under **paragraph (c)** differs from the actual amount of GST payable, adjustments must be made in accordance with the adjustment procedures under **clause 9.7**.
- (f) In **clause 9.7**, "*input tax credit*", "*supply*" and "*taxable supply*" each have the meaning given to those terms in the A New Tax System (Goods and Services Tax) Act 1999 (Cth).
- (g) AEMO will issue tax invoices and adjustment notes in respect of taxable supplies (including supplies taken to be taxable supplies under Subdivision 153-B of the GST Act) made by the *Reserve Provider* to AEMO under this Agreement, and the *Reserve Provider* will not issue tax invoices in respect of those supplies.
- (h) The *Reserve Provider* acknowledges that it is registered for GST purposes on the date of this Agreement and that it will notify AEMO if it ceases to be so registered.
- (i) AEMO acknowledges that it is registered for GST purposes on the date of this Agreement and that it will notify the *Reserve Provider* if it ceases to:
- (i) be so registered; or



- (ii) satisfy any of the requirements for issuing recipient created tax invoices listed in a relevant determination made under subsection 29-70(3) of the GST Act.

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## **10 Extent of liability**

### **10.1 AEMO Liability cap**

- (a) Subject to **paragraph (b)** and **clause 10.4**, the total amount recoverable from *AEMO* in respect of any and all *claims* arising out of any one or more events during any 12-month period with respect to, arising from, or in connection with, this Agreement and the provision of *reserve* under this Agreement is limited to a maximum aggregate amount of \$5,000,000.
- (b) Regardless of the nature of any *claim*, *AEMO* is not liable in any circumstances for any:
  - (i) damages or losses that are not direct and do not flow naturally from a breach of this Agreement, even if they may reasonably be supposed to have been in the contemplation of both parties as a probable result of the breach at the time they entered into this Agreement ;
  - (ii) loss of profit, business opportunity, production, revenue, contract or goodwill (whether direct or indirect); or
  - (iii) damages or loss to the extent that a claim results from the *Reserve Provider's* failure to act in accordance with this Agreement , *legislation* or *good electricity industry practice*.

### **10.2 Reserve Provider Liability Cap**

- (a) Except for *availability charges* that must be repaid to *AEMO* in accordance with item 8 of the Schedule and subject to **paragraph (b)**, the total amount recoverable from the *Reserve Provider* in respect of any and all *claims* arising out of any one or more events during any 12-month period with respect to, arising from, or in connection with, this Agreement and the provision of the *reserve* under this Agreement is limited to a maximum aggregate amount of \$5,000,000.
- (b) Regardless of the nature of any *claim*, the *Reserve Provider* is not liable in any circumstances for any:
  - (i) damages or losses that are not direct and do not flow naturally from a breach of this Agreement, even if they may reasonably be supposed to have been in the contemplation of both parties as a probable result of the breach at the time they entered into this Agreement ;
  - (ii) loss of profit, business opportunity, production, revenue, contract or goodwill (whether direct or indirect); or
  - (iii) damages or loss to the extent that a claim results from *AEMO's* failure to act in accordance with this Agreement, *legislation* or *good electricity industry practice*.

### **10.3 Indemnity**

Subject to **clause 10.2**, the *Reserve Provider* indemnifies *AEMO* against any liability or loss arising from, and any costs, charges or expenses incurred in connection with, a *claim* by a third person against *AEMO* with respect to, arising from, or in connection with, any act or omission of the *Reserve Provider* in relation to the provision of *reserve*.

### **10.4 National Electricity Law**

This Agreement does not vary or exclude the operation of sections 116, 119 or 120 or 120A of the *National Electricity Law*.

## 10.5 Civil Liability Act 2002

The parties agree that Part 4 of the Civil Liability Act 2002 (NSW) will not apply to any *claim*, action, suit or proceeding under or in connection with this Agreement.

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## 11 Force majeure

### 11.1 Effect on performance of obligation

A party's obligation under this Agreement (other than an obligation to pay money, including an obligation to repay money) shall be suspended during the time and to the extent that the party ("*affected party*") is unable to comply with that obligation by reason of the occurrence of an *event of force majeure*.

### 11.2 Obligation to Notify

If an *affected party* becomes aware of a circumstance it reasonably considers constitutes or is likely to constitute or result in an *event of force majeure*, it must:

- (a) immediately give the other party notice of the circumstances and of the obligations under this Agreement that have been, or will be, or are likely to be, affected by that circumstance; and
- (b) keep the other party informed both at reasonable intervals and upon request by the other party as soon as practicable following the receipt of that request of:
  - (i) the *affected party's* estimate of the likely and actual commencement (as appropriate) of and duration of the *event of force majeure*;
  - (ii) the action taken and the action proposed to be taken by the *affected party* in complying with **clause 11.3(a)**;
  - (iii) the cessation of the *event of force majeure* or the successful mitigation of the effects of the *event of force majeure*; and
  - (iv) any other matter the other party reasonably requests in connection with the occurrence of the *event of force majeure* and the matters referred to in **paragraph (b)**.

### 11.3 Obligation to mitigate

- (a) As soon as practicable after the occurrence of an *event of force majeure*, the *affected party* must use reasonable endeavours (including incurring any reasonable expenditure of funds and rescheduling manpower and resources) to mitigate the consequences of that *event of force majeure* and minimise any resulting delay in the performance of its obligations under this Agreement .
- (b) The suspension granted under **clause 11.1** does not include any delay in the performance of the affected obligation attributable to a failure by the *affected party* to comply with **paragraph (a)**.
- (c) The *affected party* bears the onus of proving that it has complied with its obligations under **paragraph (a)**.
- (d) Nothing in **clause 11** requires the *affected party* to settle or compromise a *labour dispute* where the *affected party*, in its sole and absolute discretion, considers that course to be inappropriate.

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## 12 Termination

### 12.1 Termination for default

A party ("*terminating party*") may immediately terminate this Agreement by notice to the other party ("*defaulting party*") if:

- (a) the *defaulting party* does not pay any money due under this Agreement on the due date and the *defaulting party* does not pay the money within a further period of 45 *business days* after the *terminating party* serves notice on the *defaulting party* requiring payment;
- (b) subject to **clause 12.2** the *defaulting party* does not carry out or meet any other material obligation under this Agreement and in the case of a default that is capable of remedy, does not remedy that default within 60 *business days* after the *terminating party* serves notice on the *defaulting party* requiring it to be remedied;
- (c) any representation or warranty made by the *defaulting party* in this Agreement is materially inaccurate or untrue; or
- (d) an *insolvency event* occurs in relation to the *defaulting party*.

## 12.2 Termination by AEMO

- (a) AEMO may terminate this Agreement by giving notice to the *Reserve Provider* if, after being required by AEMO to do so, the *Reserve Provider*:
  - (i) fails to demonstrate that it is capable of meeting the *contracted levels of performance*; or
  - (ii) indicates that the *reserve equipment* might not be capable of providing the relevant *reserve* in accordance with the *contracted levels of performance*.
- (b) AEMO may terminate this Agreement without charge by giving notice to the *Reserve Provider* if the *Reserve Provider* fails to *activate* or *dispatch* the *reserve* in a *trading interval* to at least 80% of the amount specified in an *instruction* for that *trading interval*.

## 12.3 Termination for convenience

- (a) AEMO may terminate this Agreement by giving the *Reserve Provider* not less than 5 *business days'* notice and upon payment of any applicable *early termination charge*.

## 12.4 Termination Notices

A notice to terminate issued under **clause 12.1, 12.2 or 12.3** takes effect on the later of:

- (a) the time it is given; and
- (b) the time specified in the notice.

## 12.5 Survival

- (a) Expiry or termination of this Agreement for any reason does not affect:
  - (i) any rights of either party against the other that:
    - (A) arose prior to the time at which expiry or termination occurred; and
    - (B) otherwise relate to or might arise at any future date from any breach of this Agreement occurring prior to the expiry or termination; or
  - (ii) the rights and obligations of the parties under **clauses 7.1 to 7.5, 9, 10, 14 and 17**.

## 12.6 Reduction of Reserve

If AEMO can terminate this Agreement under **clause 12.1 or 12.2**, AEMO may instead elect to reduce the *reserve* to be provided under this Agreement by specifying so in the notice issued under **clause 12.1 or 12.2** (as applicable). No *early termination charge* is payable to the *Reserve Provider* in connection with the reduction of *reserve*.

## 12.7 No other termination

Subject to any written law to the contrary, a party must not terminate this Agreement other than for a ground provided for under this Agreement.

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## 13 Assignment and sub-contracting

### 13.1 Assignment

- (a) The *Reserve Provider* must not *dispose* its rights in this Agreement or, in respect of *reserve equipment* owned, operated or controlled by the *Reserve Provider*, *reserve equipment* without first obtaining *AEMO*'s consent, which must not be unreasonably withheld or delayed.
- (b) *AEMO* must give its consent for the purposes of **paragraph (a)** if:
  - (i) the *Reserve Provider* *disposes* of the *reserve equipment* to one person or a group of persons ("*assignee*"); and
  - (ii) the assignee executes and delivers to *AEMO* a deed (in form and substance satisfactory to *AEMO*) prior to the *disposal* by which the *assignee* agrees to assume obligations that are substantially equivalent to the *Reserve Provider*'s obligations under this Agreement.

### 13.2 Sub-contracting

- (a) If the *Reserve Provider* sub-contracts the performance of obligations under this Agreement, the *Reserve Provider* remains responsible for the performance of those obligations.
- (b) If *AEMO* sub-contracts the performance of obligations or rights under this Agreement, *AEMO* remains responsible for the performance of those obligations and rights.

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## 14 Dispute resolution

If the *Reserve Provider* is a Registered Participant:

- (a) If a dispute arises in relation to this Agreement, the *first stage dispute resolution processes* and the *second stage dispute resolution processes* apply.
- (b) A party must not have recourse to litigation or *second stage dispute resolution processes* unless it has either given or received a *DMS referral notice*.
- (c) **Paragraph (b)** does not prevent a party seeking an urgent interlocutory injunction from a court of competent jurisdiction.
- (d) Unless otherwise agreed or determined under the *first stage dispute resolution processes* or the *second stage dispute resolution processes*, the parties must continue to perform their obligations despite the operation of **clause 14**.

If the *Reserve Provider* is not a Registered Participant:

- (a) If a party claims that a dispute has arisen between the parties relating to or arising out of this Agreement ("*dispute*"), they must give the other party a notice ("*dispute notice*").
- (b) A *dispute notice* must include details of:
  - (i) the nature of the dispute and the circumstances giving rise to the *dispute*;
  - (ii) the party's proposed resolution of the *dispute*; and
  - (iii) contact details of the relevant delegate of that party with authority to resolve the *dispute* ("*delegate*").
- (c) Upon provision of a *dispute notice*, the procedure that is to be followed to settle a *dispute* is as follows:
  - (i) first, negotiation under **paragraph (d)**;
  - (ii) second, if the *dispute* is not resolved by negotiation, mediation under **paragraphs (e) and (f)**;

- (iii) third, if the *dispute* is not resolved by mediation within one month of the appointment of the mediator, the parties agree that either party may commence proceedings in court.
- (d) Within 7 days after the date of the *dispute notice*, the *delegates* must meet and use their best endeavours to agree to a resolution of the *dispute*.
- (e) If the *dispute* is not resolved by the *delegates* within 7 days of their first meeting or by such other timeframe as the parties agree, either party may refer the *dispute* to mediation by a single mediator appointed by agreement of the parties or if they fail to agree within 30 days of referral to mediation, a mediator appointed by the President of the Institute of Arbitrators and Mediators Australia (“IAMA”) acting on the request of either party.
- (f) Unless the parties agree otherwise:
  - (i) the mediation will be conducted by a mediator under the IAMA Mediation Rules (whether or not the mediator is a legal practitioner), except that to the extent of any inconsistency between this Agreement and the IAMA Mediation Rules, this Agreement will prevail;
  - (ii) each party may appoint a person, including a legally qualified person, to represent it or assist it in the mediation;
  - (iii) each party will bear their own costs relating to the preparation for and attendance at the mediation; and
  - (iv) the costs of the mediator and any other incidental costs will be borne equally by the parties.
- (g) **Clause 14** does not prevent a party seeking an urgent interlocutory injunction from a court of competent jurisdiction.
- (h) Unless otherwise agreed, the parties must continue to perform their obligations under this Agreement despite the existence of a *dispute*.

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## 15 Warranties

- (a) The *Reserve Provider* represents and warrants to AEMO as at the date of this Agreement and at all times after the date of this Agreement that:
  - (i) during the period of *dispatch* or *activation* of the *reserve* there will not be an increase in the demand or consumption of electricity from the *network* by any other equipment, plant or process owned, contracted or controlled directly or indirectly by the *Reserve Provider*;
  - (ii) it and its *representatives* are duly qualified and skilled to provide *reserve*;
  - (iii) it will provide *reserve* in accordance with all relevant *legislation*, *good electricity industry practice* and relevant Australian Standards and codes of practice;
  - (iv) it will ensure that data of the provision of *reserve* provided to AEMO for AEMO’s use in calculating payments and issuing statements in accordance with **clause 9** will be in a form suitable for use in AEMO’s systems, and will accurately reflect the level of provision of *reserve*;
  - (v) the quantity of *reserve available* as notified by the *Reserve Provider* to AEMO from time to time including any quantity notified in the *Web Portal* is true and correct;
  - (vi) the *Reserve Provider’s* obligations under this Agreement are enforceable in accordance with their terms;
  - (vii) if *reserve* is being provided under this Agreement:
    - (A) through the reduction of *load*, any relevant end users of electricity have agreed in writing to reducing their consumption of electricity or having their

- supply of electricity interrupted for the *Reserve Provider* to provide the *reserve* in accordance with this Agreement; or
- (B) by *generation increase*, the owners of the *generating units* have agreed in writing with the *Reserve Provider* that the *generating units* may be utilised to enable the *Reserve Provider* to provide the *reserve* in accordance with this Agreement; and
- (viii) any relevant end users of electricity have agreed in writing to their Personal Information (as defined in the Privacy Act 1988 (Cth)) being disclosed to AEMO for the purposes of this Agreement;
- (ix) the *Reserve Provider* is entitled to carry out its obligations under this Agreement.
- (b) AEMO represents and warrants to the *Reserve Provider* as at the date of this Agreement and at all times after the date of this Agreement that its obligations under this Agreement are enforceable in accordance with their terms.

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## 16 Compliance with Legislation and the Requirements of an Authority

- (a) Each party must comply with *legislation* in any way affecting this Agreement.
- (b) Each party must procure that all notices required to be given, all consents required to be obtained and any form of authorisation, registration or certification required by *legislation* for the purpose of complying with its obligations under this Agreement are given or obtained.
- (c) Each party must pay all fees and bear all costs connected with such notices, consents, authorisations, registrations and certifications.
- (d) Each party must, upon demand by the other party ("*requesting party*") at any time, provide to the *requesting party* all information necessary to establish to the satisfaction of the *requesting party* that the requirements of **paragraph (b)** have been complied with.

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## 17 General

### 17.1 Notices

- (a) Subject to **paragraph (b)** and the **Schedules**, all *communications* to a party must be:
- (i) in writing;
- (ii) marked to the attention of the person named in respect of that party in the **Details**; and
- (iii) left at, sent by ordinary pre-paid post (airmail if posted to or from a place outside Australia) or in electronic form, to the address, number, or electronic mail address of the addressee specified in respect of that party in the **Details**.
- (b) Subject to the *Rules*, any:
- (i) *communications* given in the course of the day-to-day running of the *national grid* or the *national electricity market* by or on behalf of a party to the other including *instructions*; or
- (ii) request for *reserve* made by AEMO; or
- (iii) notifications of *availability* of the *reserve* and *NMIs* and *datastream suffixes* by the *Reserve Provider* in accordance with this Agreement,
- must be made by automated electronic process, telephone or other instantaneous means of *communication* as notified by AEMO.
- (c) Unless *communications* under **paragraph (b)** are recorded in some other way satisfactory to both parties, the parties must ensure that logs are kept in which persons or electronic

systems giving and receiving those *communications* record brief details of their substance and timing.

- (d) Unless a later time is specified in it, a *communication* takes effect from the time it is received.
- (e) A *communication* is taken to be received:
  - (i) in the case of a posted letter, on the 3<sup>rd</sup> (7<sup>th</sup>, if posted to or from a place outside Australia) *business day* after posting;
  - (ii) in the case of an electronic message, on production of a report by the computer from which the electronic message was sent that indicates that the message was received in its entirety at the electronic mail address of the recipient; and
  - (iii) in the case of *communications* under **paragraph (b)**, instantaneously.
- (f) Other than *communications* given under **paragraph (b)**, if a *communication* is received, or deemed to be received, on a day that is not a *business day*, or after 4:00pm *EST* on a *business day*, it is taken to be received on the next *business day*.
- (g) A party may at any time by notice given to the other party designate a different person, address or electronic mail address for the purposes of **clause 17.1** and the **Details** and any **Schedule**.
- (h) If the automated electronic process, telephone or other instantaneous means of *communication* notified by *AEMO* for the purposes of clause 17.1(b) requires a data network connection to MarketNet, the *Reserve Provider* agrees to comply with the *AEMO* terms of use applicable to such connection as notified by *AEMO* from time to time.

## **17.2 Exercise of Rights**

Subject to the express provisions of this Agreement, a party may exercise a right, power or remedy at its discretion, and separately or concurrently with another right, power or remedy. A single or partial exercise of a right, power or remedy by a party does not prevent a further exercise of that or of any other right, power or remedy. Failure by a party to exercise or delay in exercising a right, power or remedy does not prevent its exercise.

## **17.3 No Waiver or Variation**

A right may only be waived in writing, signed by the party giving the waiver and:

- (a) no other conduct of a party (including a failure to exercise, or delay in exercising, the right) operates as a waiver of the right, or otherwise prevents the exercise of the right;
- (b) a waiver of a right on one or more occasions does not operate as a waiver of that right if it arises again; and
- (c) the exercise of a right does not prevent any further exercise of that right or of any other right.

## **17.4 Amendment**

An amendment to this Agreement will be effective only if made in writing and signed by the parties.

## **17.5 Approvals and Consents**

Subject to the express provisions of this Agreement, a party may give conditionally or unconditionally or withhold its approval or consent in its absolute discretion.

## **17.6 Continuing Indemnities**

Each indemnity in this Agreement is a continuing obligation, separate and independent from the other obligations of the parties and survives the end of this Agreement.

## **17.7 Payment not necessary before Claim**

It is not necessary for a party to incur expense or make payment before enforcing a right of indemnity conferred by this Agreement.

## **17.8 Costs and Expenses**

Costs, fees and expenses of a party covered by a right of indemnity include legal expenses, fees and charges incurred by the indemnified party on a solicitor-own client basis and are not subject to taxation on a party-and-party or any other basis.

## **17.9 Further Assurances**

Each party agrees, at its own expense, on the request of another party to:

- (a) do everything reasonably necessary to give effect to this Agreement and the transactions contemplated by this Agreement (including the execution of documents); and
- (b) use reasonable endeavours to cause relevant third parties to do likewise if necessary or desirable.

## **17.10 Supervening Legislation**

Any present or future *legislation* that operates to vary an obligation or right, power or remedy of a person in connection with this Agreement is excluded to the extent permitted by law.

## **17.11 Severability**

If a provision of this Agreement is void, unenforceable, or illegal in a jurisdiction, it is severed for that jurisdiction. The remainder of this Agreement remains effective and the validity or enforceability of that provision in any other jurisdiction is not affected. This **clause 17.11** has no effect if the severance alters the basic nature of this Agreement or is contrary to public policy.

## **17.12 Entire Agreement**

Subject to the *Rules*, this Agreement constitutes the entire agreement of the parties in connection with the supply of *reserve* for the *reserve period* and any previous agreements, understandings and negotiations on that subject matter cease to have any effect.

## **17.13 Confidential Information**

All information exchanged between the parties under this Agreement or during the negotiations preceding this Agreement is declared by *AEMO* to be *confidential information* and must not be disclosed to any person except:

- (a) for the purpose of assessing the viability and deliverability of the *reserve*, in which case the *Reserve Provider* hereby grants its consent to any relevant disclosures;
- (b) in accordance with the *Rules*;
- (c) to persons nominated by participating jurisdictions for the purpose of *AEMO* consulting with participating jurisdictions and agreeing cost-sharing arrangements between regions (if applicable) as required under the National Electricity Rules in which case the *Reserve Provider* hereby grants its consent to any relevant disclosures; and
- (d) as contemplated by or for the purpose of complying with the *Rules*, the *RERT guidelines* and any relevant procedures published by *AEMO* in accordance with the *Rules* in which case the *Reserve Provider* hereby grants its consent to any relevant disclosures.

## **17.14 No other representations or warranties**

Each party acknowledges that, in entering into this Agreement it has not relied on any representations or warranties about its subject matter except as provided in this Agreement.

## **17.15 Counterparts**

This Agreement may consist of a number of copies, each signed by one or more parties to this Agreement. If so, the signed copies make up one document and the date of this Agreement will be the date on which the last counterpart was signed.



#### **17.16 Governing Law & Jurisdiction**

This Agreement and the transactions contemplated by this Agreement are governed by the laws in force in the jurisdiction referred to in the **Details**. Each party submits to the non-exclusive jurisdiction of the courts of that place.

#### **17.17 No partnership, agency or trust**

Nothing contained or implied in this Agreement:

- (a) constitutes or may be deemed to constitute a party the partner, agent or legal representative of any other party for any purpose whatsoever, or create or be deemed to create any partnership; or
- (b) creates or may be deemed to create any agency or trust.

#### **17.18 Role of AEMO**

- (a) Nothing in this Agreement will oblige *AEMO* to grant or exercise any administrative or regulatory discretion, or otherwise fetter, constrain or otherwise impair the due exercise of any administrative or regulatory discretion exercisable by *AEMO*.
- (b) Anything which *AEMO* does, fails to do or purports to do pursuant to its statutory rights, duties, powers and functions conferred by or under any law will not be deemed to be an act or omission of *AEMO* under this Agreement.

**EXECUTED** as an agreement

# Reserve Contract (Long Notice)

## Schedule 1 –Scheduled Reserve (Generation Increase)

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### 1 Definitions

In this **Schedule**:

“*block*” means the minimum amount of *reserve* that can be *dispatched* by AEMO.

“*disablement*” means reducing the output of the *reserve equipment* to the *network* as quickly as practicable until it is below its *market capacity* or is *de-synchronised*.

“*disablement lead time*” means the period required to *disable* the *reserve equipment* and is specified in **Item 2.2**.

“*dispatch constraints*” are detailed in the table in **item 4.2**.

“*dispatch end time*” means the time the *dispatch* of *reserve* specified in a *dispatch instruction* must cease.

“*dispatch instruction*” means an *instruction* from AEMO to the *Reserve Provider* to *dispatch reserve* or to *disable* the *reserve equipment* (as the case may be).

“*dispatch start time*” means the time by which the *reserve* specified in a *dispatch instruction* must be *dispatched*.

“*enablement*” means *synchronising* the *reserve equipment* until its *loading level* becomes equal to the *minimum operating level*, or preparing the *reserve equipment* to be *dispatched* above its *market capacity*.

“*enablement instruction*” means an *instruction* to *enable* the *reserve equipment*.

“*enablement lead time*” means the maximum period required from the time the *Reserve Provider* receives an *enablement instruction* until the *reserve equipment* is:

- (a) *synchronised* and its *loading level* becomes equal to the *minimum operating level* for *slow start plant*;
- (b) *ready for synchronisation* for *fast start plant*; or
- (c) *ready to be dispatched* above its *market capacity*,

and is specified in **Item 2.2**.

“*fast start plant*” means a *scheduled generating unit* that can *synchronise* and increase its *loading level* to the *firm capacity* within 30 minutes of being requested to do so.

“*firm capacity*” means the *reserve equipment’s loading level* specified in **Item 2**.

“*instruction*” means any notification by AEMO to the *Reserve Provider* in respect of the provision of *reserve* in accordance with the Agreement.

“*market capacity*” means the *loading level* specified in **Item 2**, which is:

- (a) the subject of *dispatch offers* or is considered by AEMO to be likely to be submitted or otherwise available for *dispatch*; or
- (b) provided, or will be provided, or made available for provision under any other arrangement or agreement.

“*minimum operating level*” means the minimum *loading level* at which the *reserve equipment* can operate continuously and is specified in **Item 2.2**.

“*NMI Notification Date*” means the *Condition Subsequent Fulfilment Date* specified in the Annexure to this Schedule by which the *Reserve Provider* must notify AEMO using the *Web Portal* of all *NMI’s* and *datastream suffixes* related to the provision of *reserve*.

“slow start plant” means any *scheduled generating unit* other than *fast start plant*.

“Vic AMI meter” means a smart meter installed in Victoria as part of the Victorian Government's Advanced Metering Infrastructure (AMI) Program.

“weekday” means a day that is not a Saturday or Sunday or observed as a public holiday in the *region* in which the *reserve* is located.

## 2 Description and quantity of Reserve

### 2.1 Reserve description and quantity

The *reserve* comprises the provision of *generation* as described below:

Name of Generating Unit	Firm Capacity (MW)	Market Capacity (MW)	Reserve (MW) (Firm Capacity – Market Capacity)

**Total Reserve**

MW

### 2.2 Notice of NMIs

On request from AEMO, the *Reserve Provider* must notify AEMO of all the *NMIs* which, as at the *commencement date* or at any time during the *term*, are related to equipment, plant or processes owned, contracted or controlled by the *Reserve Provider* including *NMI*'s which are not related to the provision of *reserve*.

### 2.3 Adjustments to reserve quantity and availability charge

The quantity (MW) of *reserve* specified in the table in item 2.1 will be amended to the amount specified below (provided that the quantity of the *reserve* may not exceed the total *reserve* specified in this Schedule on the date this Agreement was signed) for the applicable event and there will be a corresponding amendment to the *availability charge* with both amendments taking effect from the applicable effective date:

Event	Amendment to the quantity of reserve	Amendment to the availability charge	Effective date of amendment
Test of the <i>reserve</i>	The quantity of <i>reserve</i> provided in response to the test	The amount of the <i>availability charge</i> is amended to a pro rata amount equivalent to the amendment to the quantity of <i>reserve</i>	The <i>commencement date</i>
If AEMO <i>instructs</i> the <i>Reserve Provider</i> to provide <i>reserve</i> BEFORE a test is completed and the	The quantity of <i>reserve</i> provided in response to the <i>instruction</i>	Subject to items 5 and 8, the amount of the <i>availability charge</i> is amended to a pro rata amount equivalent to	Subject to items 5 and 8, the <i>commencement date</i>

<i>Reserve Provider</i> supplies less than the amount <i>instructed</i> by AEMO		the amendment to the quantity of <i>reserve</i>	
If AEMO <i>instructs</i> the <i>Reserve Provider</i> to provide <i>reserve</i> AFTER a test is completed and the <i>Reserve Provider</i> supplies less than the amount <i>instructed</i> by AEMO	The quantity of <i>reserve</i> provided in response to the <i>instruction</i>	Subject to items 5 and 8, the amount of the <i>availability charge</i> applicable on the day on which the <i>instruction</i> was issued is amended to a pro rata amount equivalent to the amendment to the quantity of <i>reserve</i>	Subject to items 5 and 8, the day on which the test was completed

For example, where the *reserve* specified in **item 2** of this Schedule at the time of a test or at the time an instruction is issued is 10 MW, but the quantity of *reserve* provided in response to the test or *instruction* is 8 MW:

- (a) the *reserve* amount specified in item 3 of this Schedule will be reduced to 8 MW from the effective date of amendment; and
- (b) where the *availability charge* is \$2,000 per calendar day, the *availability charge* will be reduced to \$1,600 per calendar day from the effective date of amendment.

### 3 Reserve Equipment

<b>Name of Generating Unit:</b> <sup>2</sup>	
<b>Registration Status</b>	[market/non-market]
<b>Location</b>	
<b>Connection Point</b>	
<b>Minimum Operating Level</b>	[ ] MW
<b>Enablement Lead Time</b>	[ ] hours
<b>Disablement Lead Time</b>	[ ] hours
<b>Type of scheduled generating unit</b>	[fast start plant/slow start plant]

### 4 Capabilities of Reserve Equipment

#### 4.1 Minimum and Maximum Rates of Change of the Level of Generation

The minimum and maximum rates of change of the level of *generation* that can be specified in a *dispatch instruction* are as follows:

<sup>2</sup> Copy table and use one for each Generating Unit involved.

Name of Generating Unit <sup>2</sup>				
Power output range	Minimum rate of change of power output		Maximum rate of change of power output	
	While operating on AGC	Manual Control	While operating on AGC	Manual Control
[ ] MW	[ ] MW/min	[ ] MW/min	[ ] MW/min	[ ] MW/min
[ ] MW	[ ] MW/min	[ ] MW/min	[ ] MW/min	[ ] MW/min
[ ] MW	[ ] MW/min	[ ] MW/min	[ ] MW/min	[ ] MW/min

## 4.2 Dispatch Constraints

The *reserve equipment* is subject to the following *dispatch constraints*:

Name of Generating Unit <sup>3</sup>	
<p><b>Minimum run-time</b>, ie the minimum period the <i>scheduled generating unit</i> must generate.</p> <p>For the avoidance of doubt, AEMO may issue an <i>instruction</i> to <i>disable</i> the <i>reserve</i> while the <i>reserve</i> is within the minimum run-time so that the <i>disablement lead time</i> and minimum run-time are satisfied concurrently at the end of the minimum run-time.</p>	[ ] hours
<p><b>Minimum off-time</b>, ie the minimum period between the last time the <i>scheduled generating unit</i> was <i>generating</i> and the time at which the <i>scheduled generating unit</i> can re-commence <i>generating</i>.</p>	[ ] hours
<p><b>Maximum run time</b>, ie the maximum period the <i>scheduled generating unit</i> can generate.</p>	[ ] hours
<b>Other dispatch constraints</b>	

## 5 Contracted Levels of Performance

The *contracted levels of performance* comprise the provision of *generation* by the *reserve equipment* up to the total *reserve* that conforms to the following requirements:

### 5.1 Minimum Technical Requirements

- (a) The *reserve* must be capable of being *dispatched* by *instructions* to a single point of contact with operational responsibility for the *reserve*;
- (b) The *reserve* must be capable of being *dispatched* as a *block* of not less than 10 MW, which may be made up of smaller components that are managed by the *Reserve Provider*;
- (c) The *reserve* must be capable of remaining *dispatched* for at least 1 hour;

<sup>3</sup> Copy table and use one for each Generating Unit involved.

- (d) Each *generating unit* comprising the *reserve equipment* must have a type 1, 2, 3 or 4 *metering installation* as required by Schedule 7.2 of the *Rules* or a *Vic AMI meter* to measure the electrical output or change in electrical consumption as a result of *dispatch*; and
- (e) Each *generating unit* comprising the *reserve equipment* must be capable of *supplying* electricity to the *regional reference node* in the *region* where the *reserve* is or may be required.

## 5.2 Performance Criteria

The *Reserve Provider* must be capable of:

- (a) upon receiving from *AEMO* an *enablement instruction*, *enabling* the *reserve equipment* within the *enablement lead time*;
- (b) upon receiving from *AEMO* a *dispatch instruction*, *generating* at a rate of change of the level of *generation* as required by the *dispatch instruction*, but not greater than the relevant rate set out in **Item 4.1**, unless agreed otherwise between the parties; and
- (c) unless required to continue to *generate* through *central dispatch*, upon receiving a *dispatch instruction* from *AEMO* to *disable*, *disabling* the *reserve equipment* within the *disablement lead time*.

## 5.3 Reserve taken to be not available

The *reserve* is taken to be not *available* for a [weekday] if:

- (a) the quantity of *reserve available* during any *trading interval* (in MW) on the [weekday] due to reasons other than a relevant *dispatch constraint* is less than the total quantity of *reserve* specified, or taken to be specified, in item 3.1 on that [weekday];
- (b) a *dispatch instruction* has been issued for a *trading interval* on the [weekday] and the *reserve equipment* has been unable to *generate* to at least 80% of the level requested by the *dispatch instruction* for that *trading interval*; or
- (c) the *Reserve Provider* does not respond to an ad hoc request from *AEMO* for advice on the *availability* of the *reserve* by the time and in the form and manner notified by *AEMO*.

## 5.4 Availability notice and advice by the Reserve Provider

### (a) Availability notice

At all times during the *reserve period*, the *Reserve Provider* must notify *AEMO* of the quantity of *reserve* (MW) *available*.

The *Reserve Provider* must notify *AEMO* of the quantity of *reserve available* by specifying the quantity of *reserve available* (MW) in the *Web Portal*. The quantity specified by the *Reserve Provider* must not exceed the contracted quantity.

### (b) Ad Hoc Availability Advice

*AEMO* may request advice on the *availability* of the *reserve* on an ad hoc basis. If requested by *AEMO*, the *Reserve Provider* must provide the requested information by the time and in the form and manner notified by *AEMO*. The information that may be requested includes the following:

- (i) a statement of the maximum level of *generation* that can be achieved up to the *firm capacity* for each *trading interval* for the period requested (in MWh);
- (ii) details of any maintenance proposed for the period requested that will affect the *reserve*;

- (iii) the cause of any *reserve* unavailability in the period requested;
- (iv) details of any known problems of the type referred to in **paragraph (a)(iv)**. For each problem, the *Reserve Provider* must indicate to the best of its knowledge an assessment of the risk that the problem may escalate or improve;
- (v) a description of any tests the *Reserve Provider* intends to conduct in the period requested and the proposed timing of each test and any *reserve* unavailability associated with each test; and
- (vi) such other information concerning the *availability* of the *reserve* as AEMO may reasonably request.

## 5.5 Period in which reserve is taken to be not available

If the *reserve* is taken to be not available under item 5.3 and the *Reserve Provider* had not provided prior notice of unavailability under item 5.4, the *reserve* is taken to be not available for the period commencing half-way between:

- (a) the time at which the *dispatch instruction* was issued; and
- (b) the most recent to occur of:
  - (i) The last time the *reserve* was successfully tested or dispatched;
  - (ii) The *commencement date* set out in the *Confirmation*;
  - (iii) The *conditions subsequent fulfilment date*, and concluding when the *Reserve Provider* demonstrates to AEMO's reasonable satisfaction that the *reserve* is available.

---

## 6 Requests for Provision of Reserve

### 6.1 What AEMO may Request

Subject to any advice from the *Reserve Provider* that the *reserve* is not *available*, at any time during the *reserve period*, AEMO may request the provision of any level of *generation* between the *market capacity* and the *firm capacity*.

### 6.2 Method of Requests

- (a) At any time during this Agreement, *instructions* will be issued by AEMO's *market* systems or by telephone or such other method as notified by AEMO.
- (b) Any *instructions* issued by telephone will be recorded by AEMO in accordance with Rule 4.11.4.

### 6.3 Contact Persons for Operational Purposes

Subject to clause 17.1(b), *instructions* will be given and received and communications concerning *instructions* must be made by the following persons on behalf of each party:

AEMO	
<b>Contact Person at all times:</b>  <b>Name/Title:</b>  <b>Telephone No:</b>  <b>Email:</b>	Control Room Operator on shift

Reserve Provider	
<b>Contact Person at all times:</b>  <b>Name/Title:</b>  <b>Telephone No:</b>  <b>Email:</b>	
<b>Backup Contact Person at all times:</b>  <b>Name/Title:</b>  <b>Telephone No:</b>  <b>Email:</b>	

#### 6.4 Enablement Instruction

Subject to any *dispatch constraints*, AEMO may issue an *enablement instruction* at any time during *reserve period* requiring the *Reserve Provider* to:

- (a) *synchronise* and increase the *reserve equipment's* output to the *minimum operating level* in the case of *slow start plant*; or
- (b) prepare the *reserve equipment* to *dispatch* above its *market capacity*; or
- (c) prepare the *reserve equipment* to be ready to *synchronise* and increase output to the *firm capacity* in the case of *fast start plant*.

AEMO may also request a time earlier than the time contemplated in **Item 2.2** by which the *reserve equipment* is to reach its *minimum operating level* or *market capacity*. The *Reserve Provider* must use reasonable endeavours to comply with the request.

The issue of an *enablement instruction* does not imply that a *dispatch instruction* will be issued.

#### 6.5 Dispatch Instruction

Subject to any *dispatch constraints*, AEMO may issue a *dispatch instruction* to the *Reserve Provider* at any time during *reserve period* requesting the *Reserve Provider* to *dispatch*, vary or *disable* the *reserve*. A *dispatch instruction*:

- (a) must specify the *dispatch start time* and the *dispatch end time*;
- (b) must specify the *reserve* to be *dispatched* for each *trading interval* (in MWh) from the *dispatch start time* to the *dispatch end time*, which unless agreed otherwise between the parties, must not be more than the *firm capacity*;
- (c) must not require the *reserve equipment* to *generate* below the *minimum operating level* unless the *dispatch instruction* is an *instruction to disable* or as agreed otherwise between the parties; and
- (d) must not require the *reserve equipment* to change its level of *generation* at rates of change greater than those specified in **Item 4.1**, unless agreed otherwise between the parties.

The *Reserve Provider* must comply with a *dispatch instruction* that complies with these requirements.



## 6.6 Terminating *dispatch instruction*

- (a) At any time prior to the *dispatch start time* (taking into account the *enablement lead time*) specified in an *dispatch instruction* AEMO may issue an *instruction* to the *Reserve Provider* terminating that *dispatch instruction* if AEMO acting reasonably, considers that the *reserve* to be provided pursuant to that *dispatch instruction* is not required.
- (b) Taking into account the *enablement lead time*, the *Reserve Provider* must comply with an *instruction* under (a).

## 6.7 AGC

Where available, AEMO may at any time request that the *reserve equipment* be switched to operate on AGC or under manual control. The *Reserve Provider* must comply with this request as soon as practicable.

---

# 7 Measurement and Verification

## 7.1 Measurement

Actual *interval metering data* (not *estimated metering data* or *substituted metering data*) will be used to determine the quantity of energy *dispatched* by the *reserve equipment*.

The *Reserve Provider* must provide to AEMO a list of *NMI's* and *datastreams* used to provide *reserve* in response to a *dispatch instruction* within 2 *business days* after *dispatch*.

Any relevant *metering installation* must be installed by a *Metering Provider*, and data collected by an AEMO accredited *Metering Data Provider* (category MDP 1-4 or, in respect of *Vic AMI meters*, such category accredited by AEMO entitled to collect data for *Vic AMI meters*).

The maximum level at which *reserve* is taken to have been *dispatched* is the level specified in a relevant *dispatch instruction*.

## 7.2 Verification

AEMO's *market systems*, *metering systems* and *energy management systems* will be used to verify the quantity of *reserve dispatched* under this Agreement.

If AEMO requests further information relating to the measurement and determination of the *dispatched reserve*, the *Reserve Provider* must provide that information to AEMO within 2 *business days* of AEMO's request.

The *Reserve Provider* will not be entitled to be paid the *usage charge* in relation to *reserve* provided by a *NMI* that is also included as a *NMI* in a list by another *reserve provider*. AEMO will notify the *Reserve Provider* of any *NMI* included in a list provided by the *Reserve Provider* which is included in a list by another *reserve provider*.

---

# 8 Charges

## 8.1 Billing Period

- (a) For each *billing period* during the *reserve period*, the *Reserve Provider* will be entitled to charge AEMO:
  - (i) subject to paragraphs (b) and (c), an *availability charge* of [\$XXXX] per [weekday] for each [weekday] that the *reserve* is available in that *billing period*; and
  - (ii) where *reserve* has been *dispatched* during a *trading interval* during the *billing period*, a *usage charge*, which is equal to the product of the price of [\$XXXX] and the quantity (in MWh) of the *reserve dispatched* by the

*reserve equipment* as measured at its *connection point* during each *trading interval* as a result of a *dispatch instruction*.

- (b) The amount of the *availability charge* payable by AEMO will be amended to the amount specified for the applicable event with effect from the applicable effective date as specified in the table in item 2.3 and paragraph (c) below.
- (c) The *availability charge* is not payable by AEMO to the *Reserve Provider* in respect of a [weekday] in a *billing period* during which the relevant *reserve* is not *available*, including, for the avoidance of doubt, any [weekday] on which the *reserve* is taken to be not *available* under Items 5.3, 5.4 or 5.5. If the *reserve* is taken to be not *available* for a period under item 5.5, the *Reserve Provider* must repay AEMO any *availability charge* previously paid in respect of that period.

## 8.2 Early Termination

If the *reserve* specified in this Agreement is terminated by AEMO in accordance with **clause 12.3(a)** before during the *reserve period*, the *Reserve Provider* is entitled to charge AEMO an *early termination charge* of [\$XXXX].

---

# 9 Security Payment

## 9.1 Definitions

In this item 9:

**Bank Guarantee** means a guarantee having the following attributes:

- (a) it is issued by:
  - (i) one of the following banks provided that the relevant bank has a Credit Rating that is at least equal to the Reference Credit Rating:
    - (A) Australia and New Zealand Banking Group Limited;
    - (B) Commonwealth Bank of Australia;
    - (C) National Australia Bank; or
    - (D) Westpac Banking Group Limited; or
  - (ii) any other bank that:
    - (A) is incorporated in Australia, Lawfully carrying on banking business in Australia and authorised by the Australian Prudential Regulation Authority under section 9 of the Banking Act 1959 to carry on that business; and
    - (B) has a Credit Rating that is at least equal to the Reference Credit Rating;and is approved by AEMO;
- (b) it provides for presentation and payment at a branch of the issuing bank in the City of Melbourne;
- (c) it is governed by the Law of New South Wales;
- (d) it provides an irrevocable and unconditional commitment on the part of the bank to pay without further enquiry the amount demanded by AEMO up to the face value of

the Bank Guarantee or, if a payment has previously been demanded and paid under the Bank Guarantee, that face value less the total payments previously made;

- (e) it is valid for the term of the *reserve contract*;
- (f) it is in the form set out in the **Attachment** or as otherwise prescribed by *AEMO* for the purposes of the prudential requirements under the Rules (or, if there is no such form at any time, the form prescribed by *AEMO* for this purpose (acting reasonably)); and
- (g) it is executed by the issuing bank in accordance with section 127(1) of the Corporations Act, by a person with a current power of attorney from the issuing bank, or in another way acceptable to *AEMO*. If it is executed in another way, *AEMO* may require that the validity of the execution be confirmed in a way reasonably acceptable to *AEMO*.

**Credit Rating** means the short term rating in respect of an entity assigned by the Ratings Agency.

**Minimum Amount** means an amount equivalent to the initial 4 weeks of *availability charges*

**Ratings Agency** means Standard & Poor's Financial Services LLC or one of its local subsidiaries operating as Standard & Poor's.

**Reference Credit Rating** means a short term Credit Rating from the Ratings Agency of at least 'A-1'.

## 9.2 Provision of Bank Guarantees

At all times during the term of the *reserve contract*, the *Reserve Provider* must ensure that *AEMO* is the recipient and beneficiary of one or more Bank Guarantees the aggregate face value of which must, at all times, be equal to or exceed the Minimum Amount.

## 9.3 Calling on a Guarantee

- (a) On or after a failure by the *Reserve Provider* to repay *AEMO* under item 8.1(c), *AEMO* may call on the Bank Guarantee for a sum less than or equal to the amount the *Reserve Provider* must repay *AEMO*.
- (b) *AEMO* is not required to give the *Reserve Provider* notice before it exercises its rights under this item 9 and the [dispute resolution provisions] do not apply to the exercise by *AEMO* of its rights under those clauses but *AEMO* must promptly give the *Reserve Provider* notice after it has exercised its rights under this item 9.
- (c) If *AEMO* calls on a Bank Guarantee and is paid the amount of the call, the *Reserve Provider* is taken to have paid a sum toward the repayment equal to the amount received by *AEMO* under the call.
- (d) If *AEMO* calls on an Bank Guarantee when it is not entitled to do so, it must, on demand, reimburse the *Reserve Provider* for all losses and costs incurred by the *Reserve Provider* (including any increase to the *Reserve Provider's* cost of funds) directly caused by that wrongful call.

## 9.4 No Merger of Rights

- (a) Except as provided by item 9.3(c), an exercise by *AEMO* of its rights under item 9 does not:
  - a) relieve the *Reserve Provider* of any of its obligations under the *reserve contract*; or
  - b) merge, extinguish, postpone or lessen any right *AEMO* may have against the *Reserve Provider* under the *reserve contract*.

- (b) An exercise by *AEMO* of its rights to call on a Bank Guarantee under item 9 does not extinguish the Bank Guarantee and does not prevent a later exercise by *AEMO* of its rights to make a further call on the Bank Guarantee.

### **9.5 Return of Bank Guarantee**

- (a) *AEMO* must return each Bank Guarantee to the issuing bank or, if requested by the *Reserve Provider*, to the *Reserve Provider*, within 5 Business Days of whichever of the following events occurs first:
  - a) the date on which the *Reserve Provider* has discharged all payment obligations to *AEMO* under the *reserve contract*; and
  - b) the date on which *AEMO* receives in cleared funds the total amount payable under the Bank Guarantee.
- (b) Within 10 Business Days of the date on which the *Reserve Provider* has discharged all payment obligations to *AEMO* under the *reserve contract*, *AEMO* must provide the *Reserve Provider* with a notice confirming that all of the *Reserve Provider's* payments under the *reserve contract* have been met.

## Annexure to Schedule 1 - Conditions Subsequent

Each *condition subsequent* applying to the *reserve* described in **Item 2** and *condition subsequent fulfilment date* is listed in the table below:

Condition	Condition Subsequent Fulfilment Date
<p>1</p> <p>The <i>Reserve Provider</i> must complete a test of the <i>enablement, dispatch and disablement</i> of the <i>reserve equipment</i> under instruction from <i>AEMO</i> to <i>AEMO</i>'s reasonable satisfaction.</p> <p>This test requires the <i>scheduled generating unit</i> to perform the following actions in sequence (failure to perform these actions in sequence will constitute a failure to complete this test satisfactorily):</p> <ul style="list-style-type: none"> <li>• <i>enable</i> the <i>reserve equipment</i> within the <i>enablement lead time</i>;</li> <li>• <i>generate</i> at a level above the greater of the <i>minimum operating level</i> and the <i>market capacity</i>, and in accordance with <i>dispatch instructions</i> issued by <i>AEMO</i>; and</li> <li>• <i>disable</i> under <i>instructions</i> from <i>AEMO</i> within the <i>disablement lead time</i>.</li> </ul> <p>During the test:</p> <ul style="list-style-type: none"> <li>• All automatic <i>control systems</i>, for example, the <i>excitation control system</i> and <i>governor system</i>, must be operated in their automatic regulating mode;</li> <li>• The <i>reserve equipment</i> must be operated in a constant and stable manner; and</li> <li>• If <i>AGC</i> is installed, the <i>scheduled generating unit</i> must be operated under <i>AGC</i> control.</li> </ul> <p>Trend display printouts of the performance of the <i>reserve equipment</i> must be provided to <i>AEMO</i> as evidence of completion of this test.</p>	
<p>2</p> <p>The <i>Reserve Provider</i> must notify <i>AEMO</i> using the <i>Web Portal</i> of all <i>NMI</i>'s and <i>datastream suffixes</i> related to the provision of <i>reserve</i>.</p>	
<p>3</p> <p>Finalisation of jurisdictional consultation under National Electricity Rules clause 3.20.3(c) and agreement of cost-sharing arrangements under National Electricity Rules clause 3.20.3(f) to the reasonable satisfaction of <i>AEMO</i>.</p>	
<p>4</p> <p>Provision of the Bank Guarantee to <i>AEMO</i></p>	

## Schedule 2 –Scheduled Reserve (Load Reduction)

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### 1 Definitions

In this **Schedule**:

“*block*” means the minimum amount of *reserve* that can be *dispatched* by AEMO.

“*consumer*” means a person listed as such in **Item 3**.

“*disablement*” means the cessation of the provision of *reserve* required by a *dispatch instruction* and resuming the taking of electricity supply.

“*disablement lead time*” means the maximum period required for the *reserve* to be *disabled* and is specified in **item 4**.

“*dispatch constraints*” are detailed in the table in **item 4**.

“*dispatch end time*” means the time the *dispatch* of *reserve* specified in a *dispatch instruction* must cease.

“*dispatch instruction*” means an *instruction* from AEMO to the *Reserve Provider* to *dispatch* or to *disable* the *reserve* (as the case may be).

“*dispatch start time*” means the time by which the *reserve* specified in a *dispatch instruction* must be *dispatched*.

“*enablement*” means preparing *reserve* for *dispatch*.

“*enablement instruction*” means an *instruction* from AEMO to the *Reserve Provider* to *enable* the *reserve*.

“*enablement lead time*” means the maximum period required by the *Reserve Provider* to *enable* the *reserve* in response to a *enablement instruction* and is specified in **Item 4**.

“*firm capacity*” means the *loading level* specified in **Item 3**.

“*instruction*” means any notification by AEMO to the *Reserve Provider* in respect of the provision of *reserve* in accordance with this Agreement.

“*load reduction*” is the reduction (in MW) in the level at which electricity is taken from the *network* at the *connection points* specified in **Item 3**.

“*market capacity*” means the *loading level* specified in **Item 3**, which is:

- (a) the subject of *dispatch bids* or is considered by AEMO to be likely to be submitted or otherwise available for *central dispatch*; or
- (b) provided, or will be provided, or made available for provision under any other arrangement or agreement, including any demand side management arrangement or agreement.

“*NMI Notification Date*” means the *Condition Subsequent Fulfilment Date* specified in the Annexure to this Schedule by which the *Reserve Provider* must notify AEMO using the *Web Portal* of all *NMI*'s and *datastream suffixes* related to the provision of *reserve*.

“*standby generating unit*” means a *generating unit* that is not *connected* to the *network* and will *generate* in order for the *Reserve Provider* to provide the *reserve*.

“*Vic AMI meter*” means a smart meter installed in Victoria as part of the Victorian Government's Advanced Metering Infrastructure (AMI) Program.

“*weekday*” means a day that is not a Saturday or Sunday or observed as a public holiday in the *region* in which the *reserve* is located.

# Reserve Contract (Long Notice)

## 2 Description and quantity of Reserve

### 2.1 Reserve description and quantity

The *reserve* is comprised of *load reduction* at the locations and in the amounts detailed in the following table:

<b>Location of reserve</b>	
<b>Firm capacity</b>	MW
<b>Market capacity</b>	MW

**Total Reserve** MW

### 2.2 Notice of NMIs

On request from AEMO, the *Reserve Provider* must notify AEMO of all the NMIs which, as at the *commencement date* or at any time during the *term*, are related to equipment, plant or processes owned, contracted or controlled by the *Reserve Provider* including NMI's which are not related to the provision of *reserve*.

### 2.3 Adjustments of reserve and availability charge

The quantity (MW) of *reserve* specified in the table in item 2.1 will be amended to the amount specified below (provided that the quantity of the *reserve* may not exceed the total *reserve* specified in this Schedule on the date this Agreement was signed) for the applicable event and there will be a corresponding amendment to the *availability charge* with both amendments taking effect from the applicable effective date:

Event	Amendment to the quantity of reserve	Amendment to the availability charge	Effective date of amendment
Test of the <i>reserve</i>	The quantity of <i>reserve</i> provided in response to the test	The amount of the <i>availability charge</i> is amended to a pro rata amount equivalent to the amendment to the quantity of <i>reserve</i>	The <i>commencement date</i>
If AEMO <i>instructs</i> the <i>Reserve Provider</i> to provide <i>reserve</i> BEFORE a test is completed and the <i>Reserve Provider</i> supplies less than the amount <i>instructed</i> by AEMO	The quantity of <i>reserve</i> provided in response to the <i>instruction</i>	Subject to items 5 and 8, the amount of the <i>availability charge</i> is amended to a pro rata amount equivalent to the amendment to the quantity of <i>reserve</i>	Subject to items 5 and 8, the <i>commencement date</i>
If AEMO <i>instructs</i> the <i>Reserve Provider</i> to provide <i>reserve</i> AFTER a test is completed and the <i>Reserve Provider</i> supplies less than the amount <i>instructed</i> by AEMO	The quantity of <i>reserve</i> provided in response to the <i>instruction</i>	Subject to items 5 and 8, the amount of the <i>availability charge</i> applicable on the day on which the <i>instruction</i> was	Subject to items 5 and 8, the day on which the test was completed

		issued is amended to a pro rata amount equivalent to the amendment to the quantity of <i>reserve</i>	
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For example, where the *reserve* specified in **item 2** of this Schedule at the time of a test or at the time an instruction is issued is 10 MW, but the quantity of *reserve* provided in response to the test or *instruction* is 8 MW:

- (a) the *reserve* amount specified in item 3 of this Schedule will be reduced to 8 MW from the effective date of amendment; and
- (b) where the *availability charge* is \$2,000 per calendar day, the *availability charge* will be reduced to \$1,600 per calendar day from the effective date of amendment.

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### 3 Characteristics of Reserve

<b>Enablement lead time</b>	Hours
<b>Disablement lead time</b>	Hours
<b>Maximum continuous operation</b> is the maximum time the <i>reserve</i> can be <i>dispatched</i> continuously.	Hours
<b>Minimum continuous operation</b> is the minimum time the <i>reserve</i> can be <i>dispatched</i> continuously.  For the avoidance of doubt, AEMO may issue an <i>instruction</i> to <i>disable</i> the <i>reserve</i> while the <i>reserve</i> is within the minimum continuous operation so that the <i>disablement lead time</i> and minimum continuous operation are satisfied concurrently at the end of the minimum continuous operation.	Hours
<b>Minimum time between dispatches</b>	Hours
<b>Hours of the day the <i>reserve</i> is available for dispatch</b>	
<b>Days of the week the <i>reserve</i> is available for dispatch</b>	
<b>Maximum number of consecutive days the <i>reserve</i> can be dispatched in a week</b>	
<b>Maximum number of days per week of dispatch</b>	
<b>Other dispatch constraints</b>	

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### 4 Not used

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### 5 Contracted Levels of Performance

The *contracted levels of performance* comprise the provision of *load reduction* up to the total *reserve* that conforms to the following requirements:

#### 5.1 Minimum Technical Requirements

- (a) The *reserve* must be capable of being *dispatched* by *instructions* to a single point of contact with operational responsibility for the *reserve*;



- (b) The *reserve* must be capable of being *dispatched* as a *block* of not less than 10 MW, which may be made up of smaller components that are managed by the *Reserve Provider*;
- (c) The *reserve* must be capable of remaining *dispatched* for at least 1 hour; and
- (d) Each *connection point* through which the *reserve* is being provided must have a type 1, 2, 3 or 4 *metering installation* as required by Schedule 7.2 of the *Rules* or a *Vic AMI meter* to measure the change in electrical consumption as a result of *dispatch*.

## 5.2 Performance Criteria

The *Reserve Provider* must be capable of:

- (a) upon receiving an *enablement instruction*, *enabling* the *reserve* within the *enablement lead time*;
- (b) upon receiving from AEMO a *dispatch instruction*, *dispatching* the *reserve* as required by the *dispatch instruction*; and
- (c) upon receiving a *dispatch instruction* from AEMO to *disable* the *reserve*, *disabling* the *reserve* within the *disablement lead time*.

No part of the *reserve* shall be *dispatched* prior to receipt of a relevant *dispatch instruction* without AEMO's prior consent.

*Dispatch* of the *reserve* must not lead to any consequent increase in the rate at which electricity is taken from the *network* by any other equipment or process unless this effect has been deducted from the *reserve*.

## 5.3 Reserve taken to be not available

The *reserve* is taken to be not *available* for a [weekday] if:

- (a) the quantity of *reserve available* during any *trading interval* (in MW) on the [weekday] due to reasons other than a relevant *dispatch constraint* is less than the total quantity of *reserve* specified, or taken to be specified, in item 3.1 on that [weekday];
- (b) a *dispatch instruction* has been issued for a *trading interval* on the [weekday] and the *reserve equipment* has been unable to *generate* to at least 80% of the level requested by the *dispatch instruction* for that *trading interval*; or
- (c) the *Reserve Provider* does not respond to an ad hoc request from AEMO for advice on the *availability* of the *reserve* by the time and in the form and manner notified by AEMO.

## 5.4 Availability notice and advice by the Reserve Provider

### (a) Availability notice

At all times during the *reserve period*, the *Reserve Provider* must notify AEMO of the quantity of *reserve* (MW) *available*.

The *Reserve Provider* must notify AEMO of the quantity of *reserve available* by specifying the quantity of *reserve available* (MW) in the *Web Portal*. The quantity specified by the *Reserve Provider* must not exceed the contracted quantity

### (b) Ad Hoc Availability Advice

AEMO may request advice on the *availability* of the *reserve* on an ad hoc basis. If requested by AEMO, the *Reserve Provider* must provide the requested information by the time and in the form and manner notified by AEMO. The information that may be requested includes the following:

- (i) for each *trading interval* falling within the period requested by AEMO, the *availability of reserve* (in MWh);
- (ii) the cause of any *reserve unavailability* in the period requested; and
- (iii) such other information concerning the *availability* of the *reserve* as AEMO may reasonably request.

**5.5 Period in which reserve is taken to be not available**

If the *reserve* is taken to be not available under item 5.3 and the *Reserve Provider* had not provided prior notice of unavailability under item 5.4, the *reserve* is taken to be not available for the period commencing half-way between:

- (c) the time at which the *dispatch instruction* was issued; and
- (d) the most recent to occur of:
  - (i) The last time the *reserve* was successfully tested or dispatched;
  - (ii) The *commencement date* set out in the *Confirmation*;
  - (iii) The *conditions subsequent fulfilment date*, and concluding when the *Reserve Provider* demonstrates to AEMO's reasonable satisfaction that the *reserve* is available.

**6 Requests for Provision of Reserve**

**6.1 What AEMO may Request**

Subject to any advice from the *Reserve Provider* that the *reserve* is not *available*, at any time during the *reserve period*, AEMO may request any *load reduction* between the *market capacity* and *firm capacity*.

**6.2 Method of Requests**

- (a) At any time during the *reserve period*, *instructions* will be issued by AEMO's *market systems* or by telephone or such other method as notified by AEMO.
- (b) Any *instructions* issued by telephone will be recorded by AEMO in accordance with Rule 4.11.4.

**6.3 Contact Persons for Operational Purposes**

Subject to clause 17.1(b), *instructions* will be given and received and communications concerning *instructions* must be made by the following persons on behalf of each party:

AEMO	
<b>Contact Person at all times:</b>	Control Room Operator on shift
<b>Name/Title:</b>	
<b>Telephone No:</b>	
<b>Email:</b>	
Reserve Provider	
<b>Contact Person at all times:</b>	
<b>Name/Title:</b>	
<b>Telephone No:</b>	

Email:	
Backup Contact Person at all times:	
Name/Title:	
Telephone No:	
Email:	

#### 6.4 Enablement Instruction

Subject to any *dispatch constraints*, AEMO may issue an *enablement instruction* at any time during the *reserve period* requiring the *Reserve Provider* to prepare *reserve* for *dispatch*. An *enablement instruction* must specify:

- (a) the proposed *dispatch start time* and the proposed *dispatch end time*; and
- (b) the amount of *reserve* (in MWh) the *Reserve Provider* must prepare for *dispatch* for each *trading interval*, which unless agreed otherwise between the parties, must not be greater than the *firm capacity*.

For a *load reduction* with an *enablement lead time* of zero, an *enablement instruction* will not be required and the *load reduction* shall be taken to be constantly in a state of readiness to act on a *dispatch instruction* issued by AEMO.

The issue of an *enablement instruction* does not imply that a *dispatch instruction* will be issued.

#### 6.5 Dispatch Instruction

Subject to any *dispatch constraints*, AEMO may issue a *dispatch instruction* to the *Reserve Provider* at any time during the *reserve period* requesting the *Reserve Provider* to *dispatch*, *vary* or *disable* the *reserve*. A *dispatch instruction* must specify:

- (a) the *dispatch start time* and the *dispatch end time*; and
- (b) the amount of *reserve* the *Reserve Provider* must *dispatch* for each *trading interval* (in MWh) from the *dispatch start time* to the *dispatch end time*, which unless otherwise agreed between the parties, must not be more than the *firm capacity*.

The *Reserve Provider* must comply with a *dispatch instruction* that complies with these requirements.

#### 6.6 Terminating *dispatch instruction*

- (a) At any time prior to the *dispatch start time* (taking into account the *enablement lead time*) specified in an *dispatch instruction* AEMO may issue an *instruction* to the *Reserve Provider* terminating that *dispatch instruction* if AEMO acting reasonably, considers that the *reserve* to be provided pursuant to that *dispatch instruction* is not required.
- (b) Taking into account the *enablement lead time*, the *Reserve Provider* must comply with an *instruction* under (a).

---

## 7 Measurement and Verification of Reserve

### 7.1 Measurement

Actual *metering data* (not *estimated metering data* or *substituted metering data*) will be used to determine the quantity of energy *dispatched* by the *reserve equipment*.

The *Reserve Provider* must provide to AEMO a list of *NMI's* and *datastreams* used to provide *reserve* in response to a *dispatch instruction* within 2 *business days* after *dispatch*.

The *NMI's* and *datastreams* provided in the list by the *Reserve Provider* must only be *NMI's* and *datastreams* that were notified to AEMO by the *Reserve Provider* using the *Web Portal* prior to the *NMI Notification Date*.

The *metering installation* must be installed by a *Metering Provider*, and data collected by an AEMO accredited *Metering Data Provider* (category MDP 1-4 or, in respect of *Vic AMI meters*, such category accredited by AEMO entitled to collect data for *Vic AMI meters*).

The maximum level at which *reserve* is taken to have been *dispatched* is the level specified in a relevant *dispatch instruction*.

## 7.2 Verification

AEMO's *market* systems, *metering* systems and *energy management* systems will be used to verify the quantity of *reserve dispatched* in accordance with this Agreement.

If AEMO requests further information relating to the measurement and determination of the *dispatched reserve*, the *Reserve Provider* must provide that information to AEMO within 2 *business days* of AEMO's request.

The *Reserve Provider* will not be entitled to be paid the *usage charge* in relation to *reserve* provided by a *NMI* that is also included as a *NMI* in a list by another *reserve provider*. AEMO will notify the *Reserve Provider* of any *NMI* included in a list provided by the *Reserve Provider* which is included in a list by another *reserve provider*.

The *Reserve Provider* will only be entitled to be paid a *usage charge* in relation to *reserve* provided by *NMIs* that were notified to AEMO by the *Reserve Provider* using the *Web Portal* prior to the *NMI Notification Date*.

## 7.3 Calculation

The calculation of the quantity of *reserve activated* under this Agreement will be in accordance with the following:

The aggregated electricity demand of all *NMI's* and *datastreams* in the list provided by the *Reserve Provider* to AEMO after *activation* will be used to calculate the baseline and the amount of *reserve activated*. Baselines and *reserve activated* will not be calculated for individual *NMIs* and *datastreams*.

### Unadjusted baseline calculation

$$b_t = \frac{1}{S} \sum_{i=1,2,\dots,S} c_{ti}$$

Where:

$b$  = unadjusted baseline MWh for a given time interval ( $t$ )

$i$  = one of  $S$  selected days

$S$  = the set of selected days in the 45 calendar days immediately preceding the [*weekday*] on which *reserve* was *activated* and for which the calculation is being made (the **45 day period**). The days in the 45 day period selected for the set will be based on [*weekdays*] on which *reserve* was not *activated* (the **Non-Activated Days**)

and [weekdays] on which *reserve* was *activated* (the **Activated Days**) and determined as follows:

Step 1 - This set of selected days will normally comprise the 10 Non-Activated Days immediately preceding the [weekday] on which *reserve* was *activated* and for which the calculation is being made.

Step 2 - If, in the 45 day period, there are less than 10 Non-Activated Days but 5 or more Non-Activated Days, then S comprises those Non-Activated Days.

Step 3 - If, in the 45 day period, there are less than 5 Non-Activated Days, then S comprises the Non-Activated Days plus one or more of the Activated Days in the 45 day period will added to the number of Non-Activated Days so that the total number of days in the set equals 5. The Activated Days added to the Non-Activated Days will be determined based on the level of demand during the *trading intervals* during the period of *activation* on the Activated Days (with the Activated Day with the highest demand during any *trading interval* during the period of *activation* on that Activated Day ranked highest and added to the Non-Activated Days, with the next highest ranked Activated Day added and so on, until the total number of days in the set equals 5). If 2 or more Activated Days are ranked the same based on the highest demand during any *trading interval* during the period of *activation*, the Activated Day closest in time to the [weekday] on which *reserve* was *activated* and for which the calculation is being made will be ranked higher.

$t = \text{trading interval}$ .

$c = \text{MWh electricity demand for a given trading interval (t) occurring on one of the selected days i}$ .

### Relative Root Mean Squared Error (RRMSE)

AEMO may measure the accuracy of the unadjusted baseline by determining the unadjusted baseline's relative root mean squared error (RRMSE) by comparing the *Reserve Provider's* unadjusted baseline against the 60 days not being Activated Days immediately preceding the [weekday] on which *reserve* was *activated* and for which the calculation is being made and if they vary from each other by a value greater than or equal to 20%, AEMO may adjust the variables which are used to determine the unadjusted baseline to ones which AEMO determines, acting reasonably, more accurately reflects the *Reserve Provider's* typical demand.

The RRMSE is calculated as follows:

$$RRMSE = \frac{\sqrt{\frac{\sum_{n \in N} (L_n^{baseline} - L_n^{actual})^2}{N}}}{\frac{1}{N} \times \sum_{n \in N} L_n^{actual}}$$

Where:

- $n$  is the set of *trading intervals* from which *metering data* is taken for the of the calculation.
- $N$  is the number of elements in set  $n$

- $L_n^{baseline}$  is the calculated baseline load associated with a *trading interval* in set  $n$ .
- $L_n^{actual}$  is the actual metered load associated with a *trading interval* in set  $n$ .

### Adjustment factor calculation

$$a = \frac{\sum_{t=s-8}^{t=s-3} (c_t - b_t)}{6}$$

Where:

$a$  = adjustment factor (this may be positive or negative)

$s$  = the start of the *trading interval* ( $t$ ) during which the *reserve* has been *activated* and for which the calculation is being made.

$c$  = MWh electricity demand for a given time interval ( $t$ ) during the period of *reserve activation* for which the calculation is being made.

$s-n$  = *trading interval*  $n$  30-min intervals before *activation* start time

If the adjustment factor is a positive amount, the adjustment factor is limited to an amount equivalent to 20% of the amount of the *reserve*.

If the *reserve* is *activated* for 2 or more separate periods on the same day, the adjustment factor  $a$  for each period of *activation* will be the adjustment factor calculated for the first period of *activation* on that day.

### Adjusted baseline calculation

$$B_t = b_t + a$$

$B$  = adjusted baseline MWh for a given time interval ( $t$ )

### Delivered *reserve*

$$D_t = B_t - c_t$$

$D$  = quantity of *reserve activated* for a given time interval ( $t$ )

Where  $D$  is more than the level specified in the relevant *activation instruction*,  $D$  = the level specified in the relevant *activation instruction*.

Where  $D$  is less than zero,  $D = 0$ .

---

## 8 Charges

### 8.1 Billing Period

- (a) For each *billing period* during the *reserve period*, the *Reserve Provider* will be entitled to charge AEMO:
- (i) subject to paragraphs (b) and (c), an *availability charge* of [\$XXXX] per [weekday] for each [weekday] that the *reserve* is available in that *billing period*; and
  - (ii) where *reserve* has been *dispatched* during a *trading interval* in accordance with this Agreement during the *billing period*, a *usage charge*, which is equal to the product of the price of [\$XXXX] and the quantity (in MWh) of the *reserve dispatched* by the *reserve equipment* as measured at its *connection point* during each *trading interval* as a result of a *dispatch instruction* under this Agreement.
- (b) The amount of the *availability charge* payable by AEMO will be amended to the amount specified for the applicable event with effect from the applicable effective date as specified in the table in item 2.3 and paragraph (c) below.
- (c) The *availability charge* is not payable by AEMO to the *Reserve Provider* in respect of a [weekday] in a *billing period* during which the relevant *reserve* is not available, including, for the avoidance of doubt, any [weekday] on which the *reserve* is taken to be not available under Items 5.3, 5.4 or 5.5. If the *reserve* is taken to be not available for a period under item 5.5, the *Reserve Provider* must repay AEMO any *availability charge* previously paid in respect of that period.

### 8.2 Early Termination

If the *reserve* specified in this Agreement is terminated by AEMO in accordance with clause 12.3(a) during the *reserve period*, the *Reserve Provider* is entitled to charge AEMO an early termination charge of [\$XXXX].

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## 9 Security Payment

### 9.1 Definitions

In this item 9:

**Bank Guarantee** means a guarantee having the following attributes:

- (h) it is issued by:
- (i) one of the following banks provided that the relevant bank has a Credit Rating that is at least equal to the Reference Credit Rating:
    - (A) Australia and New Zealand Banking Group Limited;
    - (B) Commonwealth Bank of Australia;
    - (C) National Australia Bank; or
    - (D) Westpac Banking Group Limited; or
  - (ii) any other bank that:
    - (A) is incorporated in Australia, Lawfully carrying on banking business in Australia and authorised by the Australian Prudential

Regulation Authority under section 9 of the Banking Act 1959 to carry on that business; and

(B) has a Credit Rating that is at least equal to the Reference Credit Rating;

and is approved by AEMO;

- (i) it provides for presentation and payment at a branch of the issuing bank in the City of Melbourne;
- (j) it is governed by the Law of New South Wales;
- (k) it provides an irrevocable and unconditional commitment on the part of the bank to pay without further enquiry the amount demanded by AEMO up to the face value of the Bank Guarantee or, if a payment has previously been demanded and paid under the Bank Guarantee, that face value less the total payments previously made;
- (l) it is valid for the term of the *reserve contract*;
- (m) it is in the form set out in the **Attachment** or as otherwise prescribed by AEMO for the purposes of the prudential requirements under the Rules (or, if there is no such form at any time, the form prescribed by AEMO for this purpose (acting reasonably)); and
- (n) it is executed by the issuing bank in accordance with section 127(1) of the Corporations Act, by a person with a current power of attorney from the issuing bank, or in another way acceptable to AEMO. If it is executed in another way, AEMO may require that the validity of the execution be confirmed in a way reasonably acceptable to AEMO.

**Credit Rating** means the short term rating in respect of an entity assigned by the Ratings Agency.

**Minimum Amount** means [an amount equivalent to the initial 4 weeks of *availability charges*]

**Ratings Agency** means Standard & Poor's Financial Services LLC or one of its local subsidiaries operating as Standard & Poor's.

**Reference Credit Rating** means a short term Credit Rating from the Ratings Agency of at least 'A-1'.

## 9.2 Provision of Bank Guarantees

At all times during the term of the *reserve contract*, the *Reserve Provider* must ensure that AEMO is the recipient and beneficiary of one or more Bank Guarantees the aggregate face value of which must, at all times, be equal to or exceed the Minimum Amount.

## 9.3 Calling on a Guarantee

- (a) On or after a failure by the *Reserve Provider* to repay AEMO under item 8.1(c), AEMO may call on the Bank Guarantee for a sum less than or equal to the amount the *Reserve Provider* must repay AEMO.
- (b) AEMO is not required to give the *Reserve Provider* notice before it exercises its rights under this item 9 and the [dispute resolution provisions] do not apply to the exercise by AEMO of its rights under those clauses but AEMO must promptly give the *Reserve Provider* notice after it has exercised its rights under this item 9.
- (c) If AEMO calls on a Bank Guarantee and is paid the amount of the call, the *Reserve Provider* is taken to have paid a sum toward the repayment equal to the amount received by AEMO under the call.



- (d) If *AEMO* calls on an Bank Guarantee when it is not entitled to do so, it must, on demand, reimburse the *Reserve Provider* for all losses and costs incurred by the *Reserve Provider* (including any increase to the *Reserve Provider's* cost of funds) directly caused by that wrongful call.

#### **9.4 No Merger of Rights**

- (a) Except as provided by item 9.3(c), an exercise by *AEMO* of its rights under item 9 does not:
  - a) relieve the *Reserve Provider* of any of its obligations under the *reserve contract*; or
  - b) merge, extinguish, postpone or lessen any right *AEMO* may have against the *Reserve Provider* under the *reserve contract*.
- (b) An exercise by *AEMO* of its rights to call on a Bank Guarantee under item 9 does not extinguish the Bank Guarantee and does not prevent a later exercise by *AEMO* of its rights to make a further call on the Bank Guarantee.

#### **9.5 Return of Bank Guarantee**

- (a) *AEMO* must return each Bank Guarantee to the issuing bank or, if requested by the *Reserve Provider*, to the *Reserve Provider*, within 5 Business Days of whichever of the following events occurs first:
  - a) the date on which the *Reserve Provider* has discharged all payment obligations to *AEMO* under the *reserve contract*; and
  - b) the date on which *AEMO* receives in cleared funds the total amount payable under the Bank Guarantee.
- (b) Within 10 Business Days of the date on which the *Reserve Provider* has discharged all payment obligations to *AEMO* under the *reserve contract*, *AEMO* must provide the *Reserve Provider* with a notice confirming that all of the *Reserve Provider's* payments under the *reserve contract* have been met.

## Annexure to Schedule 2 - Conditions Subsequent

Each *condition subsequent* applying to the *reserve* described in **Item 3** and *condition subsequent fulfilment date* is listed in the table below:

	Condition	Condition Subsequent Fulfilment Date
1.	<p>The <i>Reserve Provider</i> must complete a test of the <i>enablement, dispatch and disablement</i> of the <i>reserve</i> under instruction from <i>AEMO</i> to <i>AEMO's</i> reasonable satisfaction.</p> <p>This test requires the <i>Reserve Provider</i> to perform the following actions in sequence (failure to perform these actions in sequence will constitute a failure to complete this test satisfactorily):</p> <ul style="list-style-type: none"> <li>• <i>enable</i> the <i>reserve</i> within the <i>enablement lead time</i>;</li> <li>• provide <i>load reduction</i> at a level in accordance with <i>dispatch instructions</i> issued by <i>AEMO</i>; and</li> <li>• <i>disable</i> under <i>instructions</i> from <i>AEMO</i> within the <i>disablement lead time</i>.</li> </ul>	
2.	<p>The procedures relevant to the provision of <i>reserve</i> that have been accepted by relevant <i>consumers</i> must be provided to <i>AEMO</i> (if some procedures are generic, a typical procedure will suffice). The procedures must include information protocols and indicate the steps to be carried out for:</p> <ul style="list-style-type: none"> <li>• <i>enablement, dispatch and disablement</i>; and</li> <li>• the notifications and responses required by this Agreement for each notification of the <i>reserve's</i> availability,</li> </ul> <p>for each part of the <i>reserve</i> that relates to each relevant <i>consumer</i>.</p>	
3.	<p>The <i>Reserve Provider</i> must demonstrate to <i>AEMO's</i> reasonable satisfaction that the required notifications can be provided to the operator of each part of the <i>reserve</i> in sufficient time to allow the <i>reserve</i> to be <i>dispatched</i> in accordance with the <i>contracted levels of performance</i>.</p> <p><i>Dispatch</i> is not required as part of this demonstration.</p>	
4	<p>The <i>Reserve Provider</i> must notify <i>AEMO</i> using the <i>Web Portal</i> of all <i>NMI's</i> and <i>datastream suffixes</i> related to the provision of <i>reserve</i></p>	
5	<p>Finalisation of jurisdictional consultation under National Electricity Rules clause 3.20.3(c) and agreement of cost-sharing arrangements under National Electricity Rules clause 3.20.3(f) to the reasonable satisfaction of <i>AEMO</i>.</p>	
6	<p>[Provision of the Bank Guarantee to <i>AEMO</i>]</p>	

# Schedule 3 –Unscheduled Reserve (Generation Increase)

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## 1 Definitions

In this **Schedule**:

“*activation*” means *synchronising the reserve equipment* where required and increasing its output to the *firm capacity*.

“*activation constraints*” are detailed in the table in **Item 5.1**.

“*activation end time*” means the time the *activation* of the *reserve* must cease.

“*activation instruction*” means an instruction from AEMO for the *reserve* to become *activated* or *de-activated* (as the case may be).

“*activation lead time*” means the maximum period required by the *Reserve Provider* to *activate* *reserve* in response to an *activation instruction* including *synchronising* the relevant *non-scheduled generating unit* and, if required, increasing its output to the *firm capacity* and is specified in **Item 4**.

“*activation start time*” means the time by which the *reserve* specified in an *activation instruction* is to be *activated*.

“*block*” means the minimum amount of *reserve* that can be *activated* by AEMO.

“*de-activation*” means reducing the output of the *reserve equipment* to the *network* as quickly as practicable until it is below its *market capacity* or is *de-synchronised*.

“*de-activation lead time*” means the maximum period required to *disable* the *reserve equipment* and is specified in **Item 4**.

“*firm capacity*” means the *reserve equipment loading level* specified in **Item 3**.

“*instruction*” means any notification by AEMO to the *Reserve Provider* in respect of the provision of *reserve* in accordance with this Agreement.

“*market capacity*” means the *loading level* specified in **Item 3**, which is:

- (a) is considered by AEMO to be likely to be available to the *market*; or
- (b) provided, or will be provided, or made available for provision under any other arrangement or agreement.

“*minimum operating level*” means the minimum *loading level* at which the *reserve equipment* can operate continuously and is specified in **Item 4**.

“*NMI Notification Date*” means the *Condition Subsequent Fulfilment Date* specified in the Annexure to this Schedule by which the *Reserve Provider* must notify AEMO using the *Web Portal* of all *NMI*'s and *datastream suffixes* related to the provision of *reserve*.

“*pre-activation*” means preparing the *reserve equipment* for *activation*.

“*pre-activation instruction*” means an *instruction* to prepare the *reserve* for *activation*.

“*pre-activation lead time*” means the maximum period required to prepare the *reserve equipment* for *activation* and is specified in **Item 4**.

“*Vic AMI meter*” means a smart meter installed in Victoria as part of the Victorian Government's Advanced Metering Infrastructure (AMI) Program.

“*weekday*” means a day that is not a Saturday or Sunday or observed as a public holiday in the *region* in which the *reserve* is located.

## 2 Description and quantity of Reserve

### 2.1 Reserve description and quantity

The *reserve* comprises the provision of *generation* as described below:

Name of Generating Unit	Firm Capacity (MW)	Market Capacity (MW)	Reserve (MW) (Firm Capacity – Market Capacity)

**Total Reserve**

MW

### 2.2 Notice of NMIs

On request from AEMO, the *Reserve Provider* must notify AEMO of all the NMIs which, as at the *commencement date* or at any time during the *term*, are related to equipment, plant or processes owned, contracted or controlled by the *Reserve Provider* including NMI's which are not related to the provision of *reserve*.

### 2.3 Adjustments of *reserve* and *availability charge*

The quantity (MW) of *reserve* specified in the table in item 2.1 will be amended to the amount specified below (provided that the quantity of the *reserve* may not exceed the total *reserve* specified in this Schedule on the date this Agreement was signed) for the applicable event and there will be a corresponding amendment to the *availability charge* with both amendments taking effect from the applicable effective date:

Event	Amendment to the quantity of <i>reserve</i>	Amendment to the <i>availability charge</i>	Effective date of amendment
Test of the <i>reserve</i>	The quantity of <i>reserve</i> provided in response to the test	The amount of the <i>availability charge</i> is amended to a pro rata amount equivalent to the amendment to the quantity of <i>reserve</i>	The <i>commencement date</i>
If AEMO <i>instructs</i> the <i>Reserve Provider</i> to provide <i>reserve</i> BEFORE a test is completed and the <i>Reserve Provider</i> supplies less than the amount <i>instructed</i> by AEMO	The quantity of <i>reserve</i> provided in response to the <i>instruction</i>	Subject to items 5 and 8, the amount of the <i>availability charge</i> is amended to a pro rata amount equivalent to the amendment to the quantity of <i>reserve</i>	Subject to items 5 and 8, the <i>commencement date</i>

If AEMO instructs the Reserve Provider to provide reserve AFTER a test is completed and the Reserve Provider supplies less than the amount instructed by AEMO	The quantity of reserve provided in response to the instruction	Subject to items 5 and 8, the amount of the <i>availability charge</i> applicable on the day on which the instruction was issued is amended to a pro rata amount equivalent to the amendment to the quantity of reserve	Subject to items 5 and 8, the day on which the test was completed
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For example, where the reserve specified in **item 2** of this Schedule at the time of a test or at the time an instruction is issued is 10 MW, but the quantity of reserve provided in response to the test or instruction is 8 MW:

- (a) the reserve amount specified in item 3 of this Schedule will be reduced to 8 MW from the effective date of amendment; and
- (b) where the *availability charge* is \$2,000 per calendar day, the *availability charge* will be reduced to \$1,600 per calendar day from the effective date of amendment.

### 3 Reserve Equipment

<b>Name of Generating Unit<sup>4</sup></b>	
<b>Registration Status</b>	[market/non-market]
<b>Location</b>	
<b>Connection Point</b>	
<b>Minimum Operating Level</b>	[ ] MW
<b>Pre-activation Lead Time</b>	[ ] hours
<b>Activation Lead Time</b>	[ ] hours
<b>De-Activation Lead Time</b>	[ ] hours

### 4 Capabilities of Reserve Equipment

#### 4.1 Activation Constraints

The reserve equipment is subject to the following activation constraints:

<b>Name of Generating Unit<sup>4</sup></b>	
<b>Minimum run-time</b> , ie the minimum period the scheduled generating unit must generate.	[ ] hours

<sup>4</sup> Copy table and use one for each Generating Unit involved.

For the avoidance of doubt, <i>AEMO</i> may issue an <i>instruction</i> to <i>de-activate</i> the <i>reserve</i> while the <i>reserve</i> is within the minimum run-time so that the <i>de-activation lead time</i> and minimum run-time are satisfied concurrently at the end of the minimum run-time.	
<b>Minimum off-time</b> , ie the minimum period between the last time the <i>scheduled generating unit</i> was <i>generating</i> and the time at which the <i>scheduled generating unit</i> can re-commence <i>generating</i> .	[ ] hours
<b>Maximum run time</b> , ie the maximum period the <i>scheduled generating unit</i> can <i>generate</i> .	[ ] hours
<b>Other activation constraints</b>	

## 5 Contracted Levels of Performance

The *contracted levels of performance* comprise the provision of *generation* by the *reserve equipment* up to the total *reserve* that conforms to the following requirements:

### 5.1 Minimum Technical Requirements

- (a) The *reserve* must be capable of being *activated* by *instructions* to a single point of contact with operational responsibility for the *reserve*;
- (b) The *reserve* must be capable of being *activated* as a *block* of not less than 10 MW, which may be made up of smaller components that are managed by the *Reserve Provider*;
- (c) The *reserve* must be capable of remaining *activated* for at least 1 hour;
- (d) Each *generating unit* comprising the *reserve equipment* must have a type 1, 2, 3 or 4 *metering installation* as required by Schedule 7.2 of the *Rules* or a *Vic AMI meter* to measure the electrical output or change in electrical consumption as a result of an *activation*; and
- (e) Each *generating unit* comprising the *reserve equipment* must be capable of *supplying* electricity to the *regional reference node* in the *region* where the *reserve* is or may be required.

### 5.2 Performance Criteria

The *Reserve Provider* must be capable of:

- (a) upon receiving from *AEMO* a *pre-activation instruction*, *pre-activating* the *reserve equipment* within the *pre-activation lead time*;
- (b) upon receiving from *AEMO* an *activation instruction*, *synchronising* if required and increasing output to the *firm capacity* within the *activation lead time*; and
- (c) upon receiving from *AEMO* an *activation instruction* to *de-activate*, *de-activating* the *reserve equipment* within the *de-activation lead time*.

### 5.3 Reserve taken to be not available

The *reserve* is taken to be not *available* for a [weekday] if:

- (a) the quantity of *reserve available* during any *trading interval* (in MW) on the [weekday] due to reasons other than a relevant *dispatch constraint* is less than the total quantity of *reserve* specified, or taken to be specified, in item 3.1 on that [weekday];
- (b) a *dispatch instruction* has been issued for a *trading interval* on the [weekday] and the *reserve equipment* has been unable to *generate* to at least 80% of the level requested by the *dispatch instruction* for that *trading interval*; or
- (c) the *Reserve Provider* does not respond to an ad hoc request from AEMO for advice on the *availability* of the *reserve* by the time and in the form and manner notified by AEMO.

#### 5.4 Availability notice and advice by the Reserve Provider

##### (a) Availability notice

At all times during the *reserve period*, the *Reserve Provider* must notify AEMO of the quantity of *reserve* (MW) *available*.

The *Reserve Provider* must notify AEMO of the quantity of *reserve available* by specifying the quantity of *reserve available* (MW) in the *Web Portal*. The quantity specified by the *Reserve Provider* must not exceed the contracted quantity

##### (b) Ad Hoc Availability Advice

AEMO may request advice on the *availability* of the *reserve* on an ad hoc basis. If requested by AEMO, the *Reserve Provider* must provide the requested information by the time and in the form and manner notified by AEMO. The information that may be requested includes the following:

- (i) a statement of the maximum level of *generation* that can be achieved up to the *firm capacity* for each *trading interval* for the period requested (in MWh);
- (ii) details of any maintenance proposed for the period requested that will affect the *reserve*;
- (iii) the cause of any *reserve* unavailability in the period requested;
- (iv) details of any known problems of the type referred to in **paragraph (a)(iv)**. For each problem, the *Reserve Provider* must indicate to the best of its knowledge an assessment of the risk that the problem may escalate or improve;
- (v) a description of any tests the *Reserve Provider* intends to conduct in the period requested and the proposed timing of each test and any *reserve* unavailability associated with each test; and
- (vi) such other information concerning the *availability* of the *reserve* as AEMO may reasonably request.

#### 5.5 Period in which reserve is taken to be not available

If the *reserve* is taken to be not available under item 5.3 and the *Reserve Provider* had not provided prior notice of unavailability under item 5.4, the *reserve* is taken to be not available for the period commencing half-way between:

- (e) the time at which the *dispatch instruction* was issued; and
- (f) the most recent to occur of:
  - (iv) The last time the *reserve* was successfully tested or dispatched;
  - (v) The *commencement date* set out in the *Confirmation*;

- (vi) The *conditions subsequent fulfilment date*, and concluding when the *Reserve Provider* demonstrates to AEMO's reasonable satisfaction that the *reserve* is available.

## 6 Requests for Provision of Reserve

### 6.1 What AEMO may Request

Subject to any advice from the *Reserve Provider* that the *reserve* is not *available*, at any time during the *reserve period*, AEMO may request the provision of any level of *generation* between the *market capacity* and the *firm capacity*.

### 6.2 Method of Requests

*Instructions* will be given by telephone, which AEMO will record in accordance with Rule 4.11.4, or such other method as notified by AEMO.

### 6.3 Contact Persons for Operational Purposes

Subject to clause 17.1(b), *instructions* will be given and received and communications concerning *instructions* must be made by the following persons on behalf of each party:

AEMO	
<b>Contact Person at all times:</b>	
<b>Name/Title:</b>	Control Room Operator on shift
<b>Telephone No:</b>	
<b>Email:</b>	
Reserve Provider	
<b>Contact Person at all times:</b>	
<b>Name/Title:</b>	
<b>Telephone No:</b>	
<b>Email:</b>	
<b>Backup Contact Person at all times:</b>	
<b>Name/Title:</b>	
<b>Telephone No:</b>	
<b>Email:</b>	

### 6.4 Pre-Activation Instruction

Subject to any *activation constraints*, AEMO may issue a *pre-activation instruction* at any time during the *reserve period* requiring the *Reserve Provider* to:

- (a) prepare the *reserve equipment* for *synchronisation*; or
- (b) prepare the *reserve equipment* to *activate* above its *market capacity*.



AEMO may also request a time earlier than the time contemplated in **Item 4** by which the *reserve equipment* is to be available for *synchronisation* or reach its *market capacity*. The *Reserve Provider* must use reasonable endeavours to comply with the request.

The issue of a *pre-activation instruction* does not imply that an *activation instruction* will be issued.

## 6.5 Activation Instruction

Subject to any *activation constraints*, AEMO may issue an *activation instruction* to the *Reserve Provider* at any time during the *reserve period* requesting the *Reserve Provider* to *activate* or *de-activate* the *reserve*. An *activation instruction*:

- (a) must specify the *activation start time* (taking into account the *activation lead time*) and the *activation end time* (taking into account the *de-activation lead time*);
- (b) must specify the *reserve* to be *activated* for each *trading interval* (in MWh) from the *activation start time* to the *activation end time*, which unless agreed otherwise between the parties, must not be more than the *firm capacity*; and
- (c) must not require the *reserve equipment* to *generate* below the *minimum operating level* unless the *activation instruction* is an *instruction to de-activate*.

The *Reserve Provider* must comply with an *activation instruction* that complies with these requirements.

## 6.6 Terminating dispatch instruction

- (a) At any time prior to the *activation start time* (taking into account the *activation lead time*) specified in an *activation instruction* AEMO may issue an *instruction* to the *Reserve Provider* terminating that *activation instruction* if AEMO acting reasonably, considers that the *reserve* to be provided pursuant to that *activation instruction* is not required.
- (b) Taking into account the *activation lead time*, the *Reserve Provider* must comply with an *instruction* under (a).

## 6.7 AGC

Where available, AEMO may at any time request that the *reserve equipment* be switched to operate on AGC or under manual control. The *Reserve Provider* must comply with this request as soon as practicable.

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# 7 Measurement and Verification

## 7.1 Measurement

Actual *metering data* (not *estimated metering data* or *substituted metering data*) will be used to determine the quantity of *reserve activated* by the *reserve equipment*.

The *Reserve Provider* must provide to AEMO a list of *NMI's* and *datastreams* used to provide *reserve* under in response to an *activation instruction* within 2 *business days* after *activation*.

Any relevant *metering installation* must be installed by a *Metering Provider*, and data collected by an AEMO accredited *Metering Data Provider* (category MDP 1-4 or, in respect of *Vic AMI meters*, such category accredited by AEMO entitled to collect data for *Vic AMI meters*).

The maximum level at which the *reserve* is taken to have been *activated* will be the level specified in the relevant *activation instruction*.

## 7.2 Verification

AEMO's *market systems*, *metering systems* and *energy management systems* will be used to verify the quantity of *reserve activated* in accordance with this Agreement.

The *Reserve Provider* will not be entitled to be paid the *usage charge* in relation to *reserve* provided by a *NMI* that is also included as a *NMI* in a list by another *reserve provider*. *AEMO* will notify the *Reserve Provider* of any *NMI* included in a list provided by the *Reserve Provider* which is included in a list by another *reserve provider*.

If *AEMO* requests further information relating to the measurement and determination of the *activated reserve*, the *Reserve Provider* must provide that information to *AEMO* within 2 *business days* of *AEMO's* request.

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## 8 Charges

### 8.1 Billing Period

- (a) For each *billing period* during the *reserve period*, the *Reserve Provider* will be entitled to charge *AEMO*
- (i) subject to paragraphs (b) and (c), an *availability charge* of **[\$XXXX]** per **[weekday]** for each **[weekday]** that the *reserve* is *available* in that *billing period*;
  - (ii) subject to the *reserve* being *available* if *activated* for the *weekday* for which the *pre-activation charge* relates, a *pre-activation charge* equal to product of the price of **[\$XXXX]** and the number of times a *pre-activation instruction* (not including *instructions* amending previous *instructions*) is given during the *billing period*; and
  - (iii) where *reserve* has been *activated* in accordance with this Agreement during the *billing period*, a *usage charge*, which is equal to the product of the price of **[\$XXXX]** and the quantity (in MWh) of the *reserve activated* by the *reserve equipment* as measured at its *connection point* during each *trading interval* as a result of an *activation instruction* under this Agreement.
- (b) The amount of the *availability charge* payable by *AEMO* will be amended to the amount specified for the applicable event with effect from the applicable effective date as specified in the table in item 2.3 and paragraph (c) below.
- (c) The *availability charge* is not payable by *AEMO* to the *Reserve Provider* in respect of a **[weekday]** in a *billing period* during which the relevant *reserve* is not *available*, including, for the avoidance of doubt, any **[weekday]** on which the *reserve* is taken to be not *available* under Items 5.3, 5.4 or 5.5. If the *reserve* is taken to be not *available* for a period under item 5.5, the *Reserve Provider* must repay *AEMO* any *availability charge* previously paid in respect of that period.

### 8.2 Early Termination

If the *reserve* specified in this Agreement is terminated by *AEMO* in accordance with clause 12.3(a) during the *reserve period*, the *Reserve Provider* is entitled to charge *AEMO* an early termination charge of **[\$XXXX]**.

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## 9 Security Payment

### 9.1 Definitions

In this item 9:

**Bank Guarantee** means a guarantee having the following attributes:

- (o) it is issued by:
  - (i) one of the following banks provided that the relevant bank has a Credit Rating that is at least equal to the Reference Credit Rating:
    - (A) Australia and New Zealand Banking Group Limited;
    - (B) Commonwealth Bank of Australia;
    - (C) National Australia Bank; or
    - (D) Westpac Banking Group Limited; or
  - (ii) any other bank that:
    - (A) is incorporated in Australia, Lawfully carrying on banking business in Australia and authorised by the Australian Prudential Regulation Authority under section 9 of the Banking Act 1959 to carry on that business; and
    - (B) has a Credit Rating that is at least equal to the Reference Credit Rating;
- and is approved by *AEMO*;
- (p) it provides for presentation and payment at a branch of the issuing bank in the City of Melbourne;
- (q) it is governed by the Law of New South Wales;
- (r) it provides an irrevocable and unconditional commitment on the part of the bank to pay without further enquiry the amount demanded by *AEMO* up to the face value of the Bank Guarantee or, if a payment has previously been demanded and paid under the Bank Guarantee, that face value less the total payments previously made;
- (s) it is valid for the term of the *reserve contract*;
- (t) it is in the form set out in the **Attachment** or as otherwise prescribed by *AEMO* for the purposes of the prudential requirements under the Rules (or, if there is no such form at any time, the form prescribed by *AEMO* for this purpose (acting reasonably)); and
- (u) it is executed by the issuing bank in accordance with section 127(1) of the Corporations Act, by a person with a current power of attorney from the issuing bank, or in another way acceptable to *AEMO*. If it is executed in another way, *AEMO* may require that the validity of the execution be confirmed in a way reasonably acceptable to *AEMO*.

**Credit Rating** means the short term rating in respect of an entity assigned by the Ratings Agency.

**Minimum Amount** means an amount equivalent to the initial 4 weeks of *availability charges*

**Ratings Agency** means Standard & Poor's Financial Services LLC or one of its local subsidiaries operating as Standard & Poor's.

**Reference Credit Rating** means a short term Credit Rating from the Ratings Agency of at least 'A-1'.

## 9.2 Provision of Bank Guarantees

At all times during the term of the *reserve contract*, the *Reserve Provider* must ensure that *AEMO* is the recipient and beneficiary of one or more Bank Guarantees the aggregate face value of which must, at all times, be equal to or exceed the Minimum Amount.

### **9.3 Calling on a Guarantee**

- (a) On or after a failure by the *Reserve Provider* to repay AEMO under item 8.1(c), AEMO may call on the Bank Guarantee for a sum less than or equal to the amount the *Reserve Provider* must repay AEMO.
- (b) AEMO is not required to give the *Reserve Provider* notice before it exercises its rights under this item 9 and the [dispute resolution provisions] do not apply to the exercise by AEMO of its rights under those clauses but AEMO must promptly give the *Reserve Provider* notice after it has exercised its rights under this item 9.
- (c) If AEMO calls on a Bank Guarantee and is paid the amount of the call, the *Reserve Provider* is taken to have paid a sum toward the repayment equal to the amount received by AEMO under the call.
- (d) If AEMO calls on an Bank Guarantee when it is not entitled to do so, it must, on demand, reimburse the *Reserve Provider* for all losses and costs incurred by the *Reserve Provider* (including any increase to the *Reserve Provider's* cost of funds) directly caused by that wrongful call.

### **9.4 No Merger of Rights**

- (a) Except as provided by item 9.3(c), an exercise by AEMO of its rights under item 9 does not:
  - a) relieve the *Reserve Provider* of any of its obligations under the *reserve contract*; or
  - b) merge, extinguish, postpone or lessen any right AEMO may have against the *Reserve Provider* under the *reserve contract*.
- (b) An exercise by AEMO of its rights to call on a Bank Guarantee under item 9 does not extinguish the Bank Guarantee and does not prevent a later exercise by AEMO of its rights to make a further call on the Bank Guarantee.

### **9.5 Return of Bank Guarantee**

- (a) AEMO must return each Bank Guarantee to the issuing bank or, if requested by the *Reserve Provider*, to the *Reserve Provider*, within 5 Business Days of whichever of the following events occurs first:
  - a) the date on which the *Reserve Provider* has discharged all payment obligations to AEMO under the *reserve contract*; and
  - b) the date on which AEMO receives in cleared funds the total amount payable under the Bank Guarantee.
- (b) Within 10 Business Days of the date on which the *Reserve Provider* has discharged all payment obligations to AEMO under the *reserve contract*, AEMO must provide the *Reserve Provider* with a notice confirming that all of the *Reserve Provider's* payments under the *reserve contract* have been met.

## Annexure to Schedule 3 - Conditions Subsequent

Each *condition subsequent* applying to the *reserve* described in **Item 3** and *condition subsequent fulfilment date* is listed in the table below:

Condition	Condition Subsequent Fulfilment Date
<p>1</p> <p>The <i>Reserve Provider</i> must complete a test of the <i>pre-activation, activation and de-activation</i> of the <i>reserve equipment</i> under <i>instruction</i> from AEMO to AEMO's reasonable satisfaction.</p> <p>This test requires the <i>reserve equipment</i> to perform the following actions in sequence (failure to perform these actions in sequence will constitute a failure to complete this test satisfactorily):</p> <ul style="list-style-type: none"> <li>• <i>pre-activate</i> the <i>reserve equipment</i> within the <i>pre-activation lead time</i>;</li> <li>• <i>generate</i> at a level above the greater of the <i>minimum operating level</i> and the <i>market capacity</i>, and in accordance with <i>activation instructions</i> issued by AEMO; and</li> <li>• <i>de-activate</i> under <i>instructions</i> from AEMO within the <i>de-activation lead time</i>.</li> </ul> <p>During the test:</p> <ul style="list-style-type: none"> <li>• All automatic <i>control systems</i>, for example, the <i>excitation control system</i> and <i>governor system</i>, must be operated in their automatic regulating mode;</li> <li>• The <i>reserve equipment</i> must be operated in a constant and stable manner; and</li> <li>• If AGC is installed, the <i>reserve equipment</i> must be operated under AGC control.</li> </ul> <p>Trend display printouts of the performance of the <i>reserve equipment</i> must be provided to AEMO as evidence of completion of this test.</p>	
<p>2</p> <p>The <i>Reserve Provider</i> must complete a test of the notifications and procedures used to provide the <i>reserve</i> in accordance with the <i>contracted levels of performance</i>.</p> <p>The <i>Reserve Provider</i> must demonstrate how the <i>Reserve Provider</i> would comply with a <i>pre-activation instruction</i> and an <i>activation instruction</i>, but these actions are not required for this test.</p>	
<p>3</p> <p>The <i>Reserve Provider</i> must notify AEMO using the <i>Web Portal</i> of all <i>NMI's</i> and <i>datastream suffixes</i> related to the provision of <i>reserve</i></p>	
<p>4</p> <p>Finalisation of jurisdictional consultation under National Electricity Rules clause 3.20.3(c) and agreement of cost-sharing arrangements under National Electricity Rules clause 3.20.3(f) to the reasonable satisfaction of AEMO.</p>	
<p>5</p> <p>Provision of the Bank Guarantee to AEMO</p>	

# Schedule 4 –Unscheduled Reserve (Load Reduction)

## 1 Definitions

In this **Schedule**:

“*activation constraints*” are detailed in the table in **item 4**.

“*activation end time*” means the time the *activation* of the *reserve* specified in an *activation instruction* must cease.

“*activation instruction*” means an instruction from AEMO for the *reserve* to be *activated* or *de-activated* (as the case may be).

“*activation lead time*” means the maximum period between the issue of an *activation instruction* and the time at which the *reserve* is *activated* and is specified in **Item 4**.

“*block*” means the minimum amount of *reserve* that can be *activated* by AEMO.

“*consumer*” means a person listed as such in **Item 3**.

“*de-activate*” means the cessation of the provision of *reserve* required by an *activation instruction* and resuming the taking of supply of electricity.

“*de-activation lead time*” means the maximum period required for the *reserve* to be *de-activated* and is specified in **Item 4**.

“*firm capacity*” means the *loading level* specified in **Item 3**.

“*instruction*” means any notification by AEMO to the *Reserve Provider* in respect of the provision of *reserve* in accordance with this Agreement.

“*load reduction*” is the reduction (in MW) in the level at which electricity is taken from the *network* at the *connection points* specified in **Item 3**.

“*market capacity*” means the *loading level* specified in **Item 3**, which is:

- (a) considered by AEMO to be likely to be available to the *market*; or
- (b) provided, or will be provided, or made available for provision under any other arrangement or agreement, including any demand side management arrangement or agreement.

“*NMI Notification Date*” means the *Condition Subsequent Fulfilment Date* specified in the Annexure to this Schedule by which the *Reserve Provider* must notify AEMO using the *Web Portal* of all *NMI*'s and *datastream suffixes* related to the provision of *reserve*.

“*pre-activation*” means preparing *reserve* for *activation*.

“*pre-activation instruction*” means an *instruction* to the *Reserve Provider* to prepare the *reserve* for *activation*.

“*pre-activation lead time*” means the maximum period required for the *reserve* to reach a state of readiness to act upon an *activation instruction* and is specified in **Item 4**.

“*standby generating unit*” means a *generating unit* that is not *connected* to the *network* and will *generate* in order for the *Reserve Provider* to provide the *reserve*.

“*Vic AMI meter*” means a smart meter installed in Victoria as part of the Victorian Government's Advanced Metering Infrastructure (AMI) Program.

“*weekday*” means a day that is not a Saturday or Sunday or observed as a public holiday in the *region* in which the *reserve* is located.

# Reserve Contract (Long Notice)

## 2 Description and quantity of Reserve

### 2.1 Reserve description and quantity

The reserve is comprised of *load reduction* at the locations and in the amounts detailed in the following table:

	Name of Consumer	Location of Reserve	Firm Capacity (MW) (7 am – 10 pm EST weekdays)	Market Capacity (MW) (7 am – 10 pm EST weekdays)	Reserve (Firm Capacity – Market Capacity) (MW) (7 am – 10 pm EST weekdays) <sup>5</sup>	Does reserve rely on use of standby generating unit?	Capacity of standby generating unit  (MW)	Connection point NMI
1						[yes/no]		
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

<b>Total Reserve</b>	MW
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<sup>5</sup> This is indicative only and is not a fixed or final and are for the purposes of determining what may be available (including by way of RERT). Closer to summer, before contracting for reserve, AEMO would re-run our models to determine what and when reserve is reasonably needed to meet the reliability standard.

# Reserve Contract (Long Notice)

## 2.2 Notice of NMIs

On request from AEMO, the *Reserve Provider* must notify AEMO of all the NMIs which, as at the *commencement date* or at any time during the *term*, are related to equipment, plant or processes owned, contracted or controlled by the *Reserve Provider* including NMI's which are not related to the provision of *reserve*.

## 2.3 Adjustments of reserve and availability charge

The quantity (MW) of *reserve* specified in the table in item 2.1 will be amended to the amount specified below (provided that the quantity of the *reserve* may not exceed the total *reserve* specified in this Schedule on the date this Agreement was signed) for the applicable event and there will be a corresponding amendment to the *availability charge* with both amendments taking effect from the applicable effective date:

Event	Amendment to the quantity of reserve	Amendment to the availability charge	Effective date of amendment
Test of the <i>reserve</i>	The quantity of <i>reserve</i> provided in response to the test	The amount of the <i>availability charge</i> is amended to a pro rata amount equivalent to the amendment to the quantity of <i>reserve</i>	The <i>commencement date</i>
If AEMO <i>instructs</i> the <i>Reserve Provider</i> to provide <i>reserve</i> BEFORE a test is completed and the <i>Reserve Provider</i> supplies less than the amount <i>instructed</i> by AEMO	The quantity of <i>reserve</i> provided in response to the <i>instruction</i>	Subject to items 5 and 8, the amount of the <i>availability charge</i> is amended to a pro rata amount equivalent to the amendment to the quantity of <i>reserve</i>	Subject to items 5 and 8, the <i>commencement date</i>
If AEMO <i>instructs</i> the <i>Reserve Provider</i> to provide <i>reserve</i> AFTER a test is completed and the <i>Reserve Provider</i> supplies less than the amount <i>instructed</i> by AEMO	The quantity of <i>reserve</i> provided in response to the <i>instruction</i>	Subject to items 5 & 8, the amount of the <i>availability charge</i> applicable on the day on which the <i>instruction</i> was issued is amended to a pro rata amount equivalent to the amendment	Subject to items 5 and 8, the day on which the test was completed



		to the quantity of reserve	
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For example, where the *reserve* specified in **item 2** of this Schedule at the time of a test or at the time an instruction is issued is 10 MW, but the quantity of *reserve* provided in response to the test or *instruction* is 8 MW:

- (a) the *reserve* amount specified in item 3 of this Schedule will be reduced to 8 MW from the effective date of amendment; and
- (b) where the *availability charge* is \$2,000 per calendar day, the *availability charge* will be reduced to \$1,600 per calendar day from the effective date of amendment.

### 3 Characteristics of Reserve

<b>Pre-activation lead time</b>	Hours
<b>Activation lead time</b>	Hours
<b>De-activation lead time</b>	Hours
<b>Maximum continuous operation</b> ie the maximum time the <i>reserve</i> can be <i>activated</i> continuously.	Hours
<b>Minimum continuous operation</b> ie “the minimum time the <i>reserve</i> can be <i>activated</i> continuously.  For the avoidance of doubt, AEMO may issue an <i>instruction</i> to <i>de-activate</i> the <i>reserve</i> while the <i>reserve</i> is within the minimum continuous operation so that the <i>de-activation lead time</i> and minimum continuous operation are satisfied concurrently at the end of the minimum continuous operation.	Hours
<b>Minimum time between activations</b>	Hours
<b>Hours of the day the <i>reserve</i> is available for activation</b>	
<b>Days of the week the <i>reserve</i> is available for activation</b>	
<b>Maximum number of consecutive days the <i>reserve</i> can be activated in a week</b>	
<b>Maximum number of days per week of activation</b>	
<b>Maximum number of activations over the <i>reserve period</i></b>	
<b>Other activation constraints</b>	

### 4 Not used

### 5 Contracted Levels of Performance

The *contracted levels of performance* comprise the provision of *load reduction* up to the total *reserve* that conforms to the following requirements:

#### 5.1 Minimum Technical Requirements

- (a) The *reserve* must be capable of being *activated* by *instructions* to a single point of contact with operational responsibility for the *reserve*;
- (b) The *reserve* must be capable of being *activated* as a *block* of not less than 10 MW, which may be made up of smaller components that are managed by the *Reserve Provider*;

- (c) The *reserve* must be capable of remaining *activated* for at least 1 hour; and
- (d) Each *connection point* for the *reserve* must have a type 1, 2, 3 or 4 metering installation as required by Schedule 7.2 of the *Rules* or a *Vic AMI meter* to measure the electrical output or change in electrical consumption as a result of activation.

## 5.2 Performance Criteria

The *Reserve Provider* must be capable of:

- (a) upon receiving from *AEMO* a *pre-activation instruction*, preparing the *reserve* for activation within the *pre-activation lead time*;
- (b) upon receiving from *AEMO* an *activation instruction*, activating the *reserve* within the *activation lead time*;
- (c) upon receiving a *de-activation instruction* from *AEMO*, *de-activating* within the *de-activation lead time*.

No part of the *reserve* shall be *activated* prior to receipt of a relevant *activation instruction* without *AEMO*'s prior consent.

*Activation* of the *reserve* must not lead to any consequent increase in the rate at which electricity is taken from the *network* by any other equipment or process owned by a *consumer* unless this effect has been deducted from the *reserve*.

## 5.3 Reserve taken to be not available

The *reserve* is taken to be not *available* for a [weekday] if:

- (a) the quantity of *reserve available* during any *trading interval* (in MW) on the [weekday] due to reasons other than a relevant *dispatch constraint* is less than the total quantity of *reserve* specified, or taken to be specified, in item 3.1 on that [weekday];
- (b) a *dispatch instruction* has been issued for a *trading interval* on the [weekday] and the *reserve equipment* has been unable to *generate* to at least 80% of the level requested by the *dispatch instruction* for that *trading interval*; or
- (c) the *Reserve Provider* does not respond to an ad hoc request from *AEMO* for advice on the *availability* of the *reserve* by the time and in the form and manner notified by *AEMO*.

## 5.4 Availability notice and advice by the Reserve Provider

### (a) Availability notice

At all times during the *reserve period*, the *Reserve Provider* must notify *AEMO* of the quantity of *reserve* (MW) *available*.

The *Reserve Provider* must notify *AEMO* of the quantity of *reserve available* by specifying the quantity of *reserve available* (MW) in the *Web Portal*. The quantity specified by the *Reserve Provider* must not exceed the contracted quantity.

### (b) Ad Hoc Availability Advice

*AEMO* may request advice on the *availability* of the *reserve* on an ad hoc basis. If requested by *AEMO*, the *Reserve Provider* must provide the requested information by the time and in the form and manner notified by *AEMO*. The information that may be requested includes the following:

- (i) for each *trading interval* falling in the period requested by *AEMO*, the level at which the *reserve* is available (in MWh); and
- (ii) the cause of any *reserve unavailability* in the period requested; and
- (iii) such other information concerning the *availability* of the *reserve* as *AEMO* may reasonably request.

## 5.5 Period in which reserve is taken to be not available

If the *reserve* is taken to be not available under item 5.3 and the *Reserve Provider* had not provided prior notice of unavailability under item 5.4, the *reserve* is taken to be not available for the period commencing half-way between:

- (g) the time at which the *dispatch instruction* was issued; and
- (h) the most recent to occur of:
  - (vii) The last time the *reserve* was successfully tested or dispatched;
  - (viii) The *commencement date* set out in the *Confirmation*;
  - (ix) The *conditions subsequent fulfilment date*, and concluding when the *Reserve Provider* demonstrates to AEMO's reasonable satisfaction that the *reserve* is available.

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## 6 Requests for Provision of Reserve

### 6.1 What AEMO may Request

Subject to any advice from the *Reserve Provider* that the *reserve* is not *available*, at any time during the *reserve period*, AEMO may request any *load reduction* between the *market capacity* and *firm capacity*.

### 6.2 Method of Requests

*Instructions* will be given by telephone, which AEMO will record in accordance with Rule 4.11.4, or such other method as notified by AEMO.

### 6.3 Contact Persons for Operational Purposes

Subject to clause 17.1(b), *instructions* will be given and received and communications concerning *instructions* must be made by the following persons on behalf of each party:

AEMO	
<b>Contact Person at all times:</b>	Control Room Operator on shift
<b>Name/Title:</b>	
<b>Telephone No:</b>	
<b>Email:</b>	
Reserve Provider	
<b>Contact Person at all times:</b>	
<b>Name/Title:</b>	
<b>Telephone No:</b>	
<b>Email:</b>	
<b>Backup Contact Person at all times:</b>	
<b>Name/Title:</b>	
<b>Telephone No:</b>	

Email:	
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#### 6.4 Pre-Activation Instruction

Subject to any *activation constraints*, AEMO may issue a *pre-activation instruction* at any time during the term of this Agreement requiring the *Reserve Provider* to prepare *reserve for activation*. A *pre-activation instruction* must specify:

- (a) the proposed *activation start time* (taking into account the *activation lead time*) and the proposed *activation end time* (taking into account the *de-activation lead time*); and
- (b) the amount of *reserve* (in MWh) that the *Reserve Provider* must prepare for *activation* for each *trading interval*.

For a *load reduction* with a *pre-activation lead time* of zero, a *pre-activation instruction* will not be required and the *load reduction* shall be taken to be constantly in a state of readiness to act on an *activation instruction* issued by AEMO.

The issue of a *pre-activation instruction* does not imply that an *activation instruction* will be issued.

The *Reserve Provider* must notify AEMO as soon as the provision of *reserve* is *pre-activated*.

#### 6.5 Activation Instruction

Subject to any *activation constraints*, AEMO may issue an *activation instruction* to the *Reserve Provider* at any time during the term of this Agreement requesting the *Reserve Provider* to *activate*, vary or *de-activate* the *reserve*. The *activation instruction* must specify:

- (a) the *activation start time* (taking into account the *activation lead time*) and the *activation end time* (taking into account the *de-activation lead time*); and
- (b) the amount of *reserve* the *Reserve Provider* must *activate* for each *trading interval* from the *activation start time* to the *activation end time* (in MWh), which unless agreed otherwise between the parties, must not be greater than the *firm capacity*.

The *Reserve Provider* must comply with an *activation instruction* that complies with these requirements.

The *Reserve Provider* must notify AEMO as soon as the provision of *reserve* is *activated*.

#### 6.6 Terminating *dispatch instruction*

- (a) At any time prior to the *activation start time* (taking into account the *activation lead time*) specified in an *activation instruction* AEMO may issue an *instruction* to the *Reserve Provider* terminating that *activation instruction* if AEMO acting reasonably, considers that the *reserve* to be provided pursuant to that *activation instruction* is not required.
- (b) Taking into account the *activation lead time*, the *Reserve Provider* must comply with an *instruction* under (a).

#### 6.7 De-activation

The *Reserve Provider* must notify AEMO as soon as the provision of *reserve* is *de-activated*.

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## 7 Measurement and Verification

### 7.1 Measurement

Measurement of any *reserve activated* under this Agreement will be in accordance with the following:

- (a) Actual *metering data* (not *estimated metering data* or *substituted metering data*) will be used to determine the quantity of *load reduction*.
- (b) The *Reserve Provider* must provide to AEMO a list of *NMI's* and *datastreams* used to provide *reserve* in response to an *activation instruction* within 2 *business days* after *activation*.
- (c) The *NMI's* and *datastreams* provided in the list by the *Reserve Provider* must only be *NMI's* and *datastreams* that were notified to AEMO by the *Reserve Provider* using the *Web Portal* prior to the *NMI Notification Date*.
- (d) Any relevant metering installation must be installed by a Metering Provider, and data collected by an AEMO accredited Metering Data Provider (category MDP 1-4 or, in respect of *Vic AMI meters*, such category accredited by AEMO entitled to collect data for *Vic AMI meters*).
- (e) The maximum level at which *reserve* is taken to have been *dispatched* is the level specified in a relevant *dispatch instruction*.

## 7.2 Verification

Verification of the measurement of any *reserve activated* under this Agreement will be in accordance with the following:

- (a) AEMO's market systems, metering systems and energy management systems will be used to verify the quantity of reserve activated under a reserve contract.
- (b) The *Reserve Provider* will not be entitled to be paid the *usage charge* in relation to *reserve* provided by a *NMI* that is also included as a *NMI* in a list by another reserve provider. AEMO will notify the *Reserve Provider* of any *NMI* included in a list provided by the *Reserve Provider* which is included in a list by another reserve provider.
- (c) The *Reserve Provider* will only be entitled to be paid a *usage charge* in relation to *reserve* provided by *NMIs* that were notified to AEMO by the *Reserve Provider* using the *Web Portal* prior to the *NMI Notification Date*.
- (d) If AEMO requests further information relating to the measurement and determination of the *activated reserve*, the *Reserve Provider* must provide that information to AEMO within 2 *business days* of AEMO's request.

## 7.3 Calculation

The calculation of the quantity of *reserve activated* under this Agreement will be in accordance with the following:

The aggregated electricity demand of all *NMI's* and *datastreams* in the list provided by the *Reserve Provider* to AEMO after *activation* will be used to calculate the baseline and the amount of *reserve activated*. Baselines and *reserve activated* will not be calculated for individual *NMIs* and *datastreams*.

### Unadjusted baseline calculation

$$b_t = \frac{1}{S} \sum_{i=1,2,\dots,S} c_{ti}$$

Where:

$b$  = unadjusted baseline MWh for a given time interval ( $t$ )

$i$  = one of  $S$  selected days

$S$  = the set of selected days in the 45 calendar days immediately preceding the [weekday] on which *reserve* was *activated* and for which the calculation is being made (the **45 day period**). The days in the 45 day period selected for the set will be based on [weekdays] on which *reserve* was not *activated* (the **Non-Activated Days**) and [weekdays] on which *reserve* was *activated* (the **Activated Days**) and determined as follows:

Step 1 - This set of selected days will normally comprise the 10 Non-Activated Days immediately preceding the [weekday] on which *reserve* was *activated* and for which the calculation is being made.

Step 2 - If, in the 45 day period, there are less than 10 Non-Activated Days but 5 or more Non-Activated Days, then  $S$  comprises those Non-Activated Days.

Step 3 - If, in the 45 day period, there are less than 5 Non-Activated Days, then  $S$  comprises the Non-Activated Days plus one or more of the Activated Days in the 45 day period will added to the number of Non-Activated Days so that the total number of days in the set equals 5. The Activated Days added to the Non-Activated Days will be determined based on the level of demand during the *trading intervals* during the period of *activation* on the Activated Days (with the Activated Day with the highest demand during any *trading interval* during the period of *activation* on that Activated Day ranked highest and added to the Non-Activated Days, with the next highest ranked Activated Day added and so on, until the total number of days in the set equals 5). If 2 or more Activated Days are ranked the same based on the highest demand during any *trading interval* during the period of *activation*, the Activated Day closest in time to the [weekday] on which *reserve* was *activated* and for which the calculation is being made will be ranked higher.

$t$  = *trading interval*.

$c$  = MWh electricity demand for a given *trading interval* ( $t$ ) occurring on one of the selected days  $i$ .

### **Relative Root Mean Squared Error (RRMSE)**

*AEMO* may measure the accuracy of the unadjusted baseline by determining the unadjusted baseline's relative root mean squared error (RRMSE) by comparing the *Reserve Provider's* unadjusted baseline against the 60 days not being Activated Days immediately preceding the [weekday] on which *reserve* was *activated* and for which the calculation is being made and if they vary from each other by a value greater than or equal to 20%, *AEMO* may adjust the variables which are used to determine the unadjusted baseline to ones which *AEMO* determines, acting reasonably, more accurately reflects the *Reserve Provider's* typical demand.

The RRMSE is calculated as follows:

$$RRMSE = \frac{\sqrt{\frac{\sum_{n \in N} (L_n^{baseline} - L_n^{actual})^2}{N}}}{\frac{1}{N} \times \sum_{n \in N} L_n^{actual}}$$

Where:

- $n$  is the set of *trading intervals* from which *metering data* is taken for the of the calculation.
- $N$  is the number of elements in set  $n$
- $L_n^{baseline}$  is the calculated baseline load associated with a *trading interval* in set  $n$ .
- $L_n^{actual}$  is the actual metered load associated with a *trading interval* in set  $n$ .

### Adjustment factor calculation

$$a = \frac{\sum_{t=s-8}^{t=s-3} (c_t - b_t)}{6}$$

Where:

$a$  = adjustment factor (this may be positive or negative)

$s$  = the start of the *trading interval* ( $t$ ) during which the *reserve* has been *activated* and for which the calculation is being made.

$c$  = MWh electricity demand for a given time interval ( $t$ ) during the period of *reserve activation* for which the calculation is being made.

$s-n$  = *trading interval*  $n$  30-min intervals before *activation* start time

If the adjustment factor is a positive amount, the adjustment factor is limited to an amount equivalent to 20% of the amount of the *reserve*.

If the *reserve* is activated for 2 or more separate periods on the same day, the adjustment factor  $a$  for each period of *activation* will be the adjustment factor calculated for the first period of *activation* on that day

### Adjusted baseline calculation

$$B_t = b_t + a$$

$B$  = adjusted baseline MWh for a given time interval ( $t$ )

### Delivered *reserve*

$$D_t = B_t - c_t$$

$D$  = quantity of *reserve activated* for a given time interval ( $t$ )

Where D is more than the level specified in the relevant *activation instruction*, D = the level specified in the relevant *activation instruction*.

Where D is less than zero, D = 0.

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## 8 Charges

### 8.1 Billing Period

- (a) For each *billing period* during the *reserve period*, the *Reserve Provider* will be entitled to charge AEMO:
- (i) subject to paragraphs (b) and (c), an *availability charge* of [\$XXXX] per [weekday] for each [weekday] that the *reserve* is available in that *billing period*;
  - (ii) subject to the *reserve* being available if *activated* for the *weekday* for which the *pre-activation charge* relates, a *pre-activation charge* equal to product of the price for *pre-activating* of [\$XXXX] and the number of times a *pre-activation instruction* (not including *instructions* amending previous *instructions*) is given during the *billing period*; and
  - (iii) where *reserve* has been *activated* during a *trading interval* in accordance with this Agreement during the *billing period*, a *usage charge* equal to the product of the price for usage of [\$XXXX] and the quantity (in MWh) of the *reserve activated* as measured, verified and calculated in accordance with this Agreement.
- (b) The amount of the *availability charge* payable by AEMO will be amended to the amount specified for the applicable event with effect from the applicable effective date as specified in the table in item 2.3 and paragraph (c) below.
- (c) The *availability charge* is not payable by AEMO to the *Reserve Provider* in respect of a [weekday] in a *billing period* during which the relevant *reserve* is not available including, for the avoidance of doubt, any [weekday] on which the *reserve* is taken to be not available under Item 5.3, 5.4 or 5.5. If the *reserve* is taken to be not available for a period under item 5.5, the *Reserve Provider* must repay AEMO any *availability charge* previously paid in respect of that period.

### 8.2 Early Termination

If the *reserve* specified in this Agreement is terminated by AEMO in accordance with **clause 12.3(a)** during the *reserve period*, the *Reserve Provider* will be entitled to charge AEMO an *early termination charge* of [\$XXXX].

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## 9 Security Payment

### 9.1 Definitions

In this item 9:

**Bank Guarantee** means a guarantee having the following attributes:

- (v) it is issued by:
  - (i) one of the following banks provided that the relevant bank has a Credit Rating that is at least equal to the Reference Credit Rating:



- (A) Australia and New Zealand Banking Group Limited;
- (B) Commonwealth Bank of Australia;
- (C) National Australia Bank; or
- (D) Westpac Banking Group Limited; or
- (ii) any other bank that:
  - (A) is incorporated in Australia, Lawfully carrying on banking business in Australia and authorised by the Australian Prudential Regulation Authority under section 9 of the Banking Act 1959 to carry on that business; and
  - (B) has a Credit Rating that is at least equal to the Reference Credit Rating;
 and is approved by AEMO;
- (w) it provides for presentation and payment at a branch of the issuing bank in the City of Melbourne;
- (x) it is governed by the Law of New South Wales;
- (y) it provides an irrevocable and unconditional commitment on the part of the bank to pay without further enquiry the amount demanded by AEMO up to the face value of the Bank Guarantee or, if a payment has previously been demanded and paid under the Bank Guarantee, that face value less the total payments previously made;
- (z) it is valid for the term of the *reserve contract*;
- (aa) it is in the form set out in the **Attachment** or as otherwise prescribed by AEMO for the purposes of the prudential requirements under the Rules (or, if there is no such form at any time, the form prescribed by AEMO for this purpose (acting reasonably)); and
- (bb) it is executed by the issuing bank in accordance with section 127(1) of the Corporations Act, by a person with a current power of attorney from the issuing bank, or in another way acceptable to AEMO. If it is executed in another way, AEMO may require that the validity of the execution be confirmed in a way reasonably acceptable to AEMO.

**Credit Rating** means the short term rating in respect of an entity assigned by the Ratings Agency.

**Minimum Amount** means an amount equivalent to the initial 4 weeks of *availability charges*

**Ratings Agency** means Standard & Poor's Financial Services LLC or one of its local subsidiaries operating as Standard & Poor's.

**Reference Credit Rating** means a short term Credit Rating from the Ratings Agency of at least 'A-1'.

## 9.2 Provision of Bank Guarantees

At all times during the term of the *reserve contract*, the *Reserve Provider* must ensure that AEMO is the recipient and beneficiary of one or more Bank Guarantees the aggregate face value of which must, at all times, be equal to or exceed the Minimum Amount.

## 9.3 Calling on a Guarantee

- (a) On or after a failure by the *Reserve Provider* to repay AEMO under item 8.1(c), AEMO may call on the Bank Guarantee for a sum less than or equal to the amount the *Reserve Provider* must repay AEMO.

- (b) *AEMO* is not required to give the *Reserve Provider* notice before it exercises its rights under this item 9 and the [dispute resolution provisions] do not apply to the exercise by *AEMO* of its rights under those clauses but *AEMO* must promptly give the *Reserve Provider* notice after it has exercised its rights under this item 9.
- (c) If *AEMO* calls on a Bank Guarantee and is paid the amount of the call, the *Reserve Provider* is taken to have paid a sum toward the repayment equal to the amount received by *AEMO* under the call.
- (d) If *AEMO* calls on an Bank Guarantee when it is not entitled to do so, it must, on demand, reimburse the *Reserve Provider* for all losses and costs incurred by the *Reserve Provider* (including any increase to the *Reserve Provider's* cost of funds) directly caused by that wrongful call.

#### **9.4 No Merger of Rights**

- (a) Except as provided by item 9.3(c), an exercise by *AEMO* of its rights under item 9 does not:
  - a) relieve the *Reserve Provider* of any of its obligations under the *reserve contract*; or
  - b) merge, extinguish, postpone or lessen any right *AEMO* may have against the *Reserve Provider* under the *reserve contract*.
- (b) An exercise by *AEMO* of its rights to call on a Bank Guarantee under item 9 does not extinguish the Bank Guarantee and does not prevent a later exercise by *AEMO* of its rights to make a further call on the Bank Guarantee.

#### **9.5 Return of Bank Guarantee**

- (a) *AEMO* must return each Bank Guarantee to the issuing bank or, if requested by the *Reserve Provider*, to the *Reserve Provider*, within 5 Business Days of whichever of the following events occurs first:
  - a) the date on which the *Reserve Provider* has discharged all payment obligations to *AEMO* under the *reserve contract*; and
  - b) the date on which *AEMO* receives in cleared funds the total amount payable under the Bank Guarantee.
- (b) Within 10 Business Days of the date on which the *Reserve Provider* has discharged all payment obligations to *AEMO* under the *reserve contract*, *AEMO* must provide the *Reserve Provider* with a notice confirming that all of the *Reserve Provider's* payments under the *reserve contract* have been met.

## Annexure to Schedule 4 - Conditions Subsequent

Each *condition subsequent* applying to the *reserve* described in **Item 3** and *condition subsequent fulfilment date* is listed in the table below:

Condition	Condition Subsequent Fulfilment Date
<p>1. The <i>Reserve Provider</i> must complete a test of the <i>pre-activation</i>, <i>activation</i> and <i>de-activation</i> of the <i>reserve</i> under instruction from <i>AEMO</i> to <i>AEMO</i>'s reasonable satisfaction.</p> <p>This test requires the <i>Reserve Provider</i> to perform the following actions in sequence (failure to perform these actions in sequence will constitute a failure to complete this test satisfactorily):</p> <ul style="list-style-type: none"> <li>• <i>pre-activate</i> the <i>reserve</i> within the <i>pre-activation lead time</i>;</li> <li>• provide <i>load reduction</i> at a level in accordance with <i>activation instructions</i> issued by <i>AEMO</i>; and</li> <li>• <i>de-activate</i> under <i>instructions</i> from <i>AEMO</i> within the <i>de-activation lead time</i>.</li> </ul>	
<p>2. The procedures relevant to the provision of <i>reserve</i> that have been accepted by relevant <i>consumers</i> must be provided to <i>AEMO</i> (if some procedures are generic, a typical procedure will suffice). The procedures must include information protocols and indicate the steps to be carried out for:</p> <ul style="list-style-type: none"> <li>• <i>pre-activation</i>, <i>activation</i> and <i>de-activation</i> of that part of the <i>reserve</i>;</li> <li>and</li> <li>• the notifications and responses required for each notification of the <i>reserve's</i> availability,</li> </ul> <p>for each part of the <i>reserve</i> that relates to each relevant <i>consumer</i>.</p>	
<p>3. The <i>Reserve Provider</i> must demonstrate to <i>AEMO</i>'s reasonable satisfaction that the required notifications can be provided to the operator of each part of the <i>reserve</i> in sufficient time to allow the <i>reserve</i> to be <i>activated</i> in accordance with the <i>contracted levels of performance</i>.</p> <p><i>Pre-activation</i> and <i>activation</i> are not required as part of this demonstration.</p>	
<p>4. Where the provision of <i>reserve</i> relies on <i>standby generation</i> being available to supply the <i>load disconnected</i> from the <i>network</i>, the <i>Reserve Provider</i> must provide <i>AEMO</i> with test certificates or other evidence of satisfactory starts of each <i>standby generating unit</i>, indicating that the prime mover and energisation of the alternator of each <i>standby generating unit</i> were started recently without fail and the <i>standby generating unit</i> must <i>generate</i> electricity for at least 1 hour.</p> <p>The evidence to be provided to <i>AEMO</i> must indicate that each <i>standby generating unit</i> was tested within 30 days of the date of provision of the evidence to <i>AEMO</i>.</p>	
<p>5. The <i>Reserve Provider</i> must notify <i>AEMO</i> using the <i>Web Portal</i> of all <i>NM's</i> and <i>datastream suffixes</i> related to the provision of <i>reserve</i></p>	
<p>6. Finalisation of jurisdictional consultation under National Electricity Rules clause 3.20.3(c) and agreement of cost-sharing arrangements under National Electricity Rules clause 3.20.3(f) to the reasonable satisfaction of <i>AEMO</i>.</p>	
<p>7. Provision of the Bank Guarantee to <i>AEMO</i></p>	

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## ATTACHMENT – FORM OF BANK GUARANTEE

### [FINANCIAL INSTITUTION LETTERHEAD]

TO: Australian Energy Market Operator Limited  
ABN 94 072 010 327  
Level 22, 530 Collins Street  
MELBOURNE VIC 3000

**Attention: Chief Operating Officer**

Dear Sir

### Guarantee

#### Defined Terms

Unless otherwise defined, the meaning of all capitalised terms is specified in table below:

<b>RESERVE PROVIDER:</b>	Name:	
	ABN:	
	Address:	
	Fax No:	
<b>Maximum Period:</b>		24 hours
<b>Financial Institution:</b>	Name:	
	ABN:	
	Address:	
	Fax No:	
	Contact Person:	
	Contact Person Telephone No:	
<b>Maximum Amount:</b>		AUD
<b>Guarantee No:</b>		
<b>Effective Date:</b>		
<b>Expiry Date:</b>		

#### Introduction

This is a Guarantee for the benefit of the Australian Energy Market Operator Limited (**AEMO**) provided in accordance with a reserve contract entered into between AEMO and the Reserve Provider on or about [insert date] (**Reserve Contract**).

At the request of the Reserve Provider and in consideration of AEMO's:

- (a) acceptance of this Guarantee for the purposes of the Reserve Contract at our request; or
- (b) payment or agreement to pay us the sum of \$1; or
- (c) extending other valuable consideration to Reserve Provider at our request,

the Financial Institution unconditionally and irrevocably undertakes to pay to AEMO on demand from time to time any and all amounts (in AUD) to an aggregate amount not exceeding the Maximum Amount.

### **Demand**

A demand from AEMO under this Guarantee must:

- 1 be in writing and sent, presented or faxed to the Financial Institution at the address and fax number specified in the Details;
- 2 state it is sent under the Guarantee No. specified in the Details;
- 3 specify the amount demanded by AEMO;
- 4 specify the time at which payment is to be made (such time to be not less than the Maximum Period after the demand is received by the Financial Institution); and
- 5 be signed by, or purportedly signed by, the Chief Financial Officer or the Group Manager Commercial Services of AEMO or any person acting in the place of or performing the duties of either of those officers.

Any telephone communications to the Financial Institution should be directed to the Contact Person using the Contact Person Telephone No.

The Financial Institution must pay the amount specified in a demand in cleared funds to the account specified in the demand at or before the time specified for payment, however, if:

- (A) in the case where the demand is sent, it is received by the Financial Institution; or
- (B) in the case where the demand is presented or faxed, it is received by the Financial Institution,

(as the case may be) on a day that is not a Business Day or after 3.00 pm in the place where the relevant office of the Financial Institution is situated on a Business Day, the Financial Institution will be taken to have received the demand at 9.00 am in the place where the relevant office of the Financial Institution is situated on the next Business Day. For this purpose, a "Business Day" is a day on which the Financial Institution is open for business in the city in which the Financial Institution's address set out in the Details is located.

If a demand under this Guarantee is faxed to the Financial Institution, AEMO must provide to the Financial Institution the original of the fax as soon as practicable after the fax is sent. Notwithstanding this requirement, the Financial Institution must pay the amount specified in the faxed demand on the basis of the faxed demand.

### **Other matters**

The Financial Institution must make the payment demanded without reference to the Reserve Provider and notwithstanding any contrary notice or direction from the Reserve Provider.

This Guarantee is a primary obligation and is not reduced, impaired, discharged or otherwise affected by anything that might otherwise affect it, or would discharge a surety, at law or in equity including, but not limited to, any extension or variation to the Reserve Contract or time or other indulgence or forbearance on the part of AEMO on the one hand or the Reserve Provider on the other hand to each other made or agreed without the Financial Institution's knowledge or consent.

The Financial Institution irrevocably waives to the fullest extent it is permitted to do so by law any right to claim sovereign immunity for itself and its assets (including from jurisdiction, enforcement or execution) to which it might otherwise be entitled in any action based on this Guarantee that may be instituted in a competent court.

This Guarantee:

- (a) must not be assigned without the Financial Institution's written consent; and
- (b) is governed by and construed in accordance with the laws of Victoria.

### Effective Date

This Guarantee will take effect on and from the Effective Date.

### Termination

A demand may be made under this Guarantee at any time until the first to occur of:

- (i) the Financial Institution's receiving notice in writing signed by the Chief Financial Officer or Group Manager Commercial Services of AEMO or any person acting in the place of or performing the duties of any of those officers that the Guarantee is no longer required;
- (ii) payment to AEMO by the Financial Institution of the whole of the Maximum Amount;
- (iii) replacement of this Guarantee by another guarantee in a form satisfactory to AEMO for an amount agreed to by the Reserve Provider and AEMO; and
- (iv) 5.00 pm, in the place where the relevant office of the Financial Institution is located, on the Expiry Date (unless prior to that date AEMO notifies the Financial Institution in writing that an application has been made for the winding up of the Reserve Provider, in which case this Guarantee will continue until the first to occur of the events listed in paragraphs (i), (ii) and (iii)).

The Financial Institution may at any time, without being required to do so, pay to AEMO the Maximum Amount less any amounts the Financial Institution may have already paid under this Guarantee (or such lesser sum as the Chief Financial Officer or Group Manager Commercial Services of AEMO may agree in writing) and thereupon its liability under this Guarantee immediately ceases.

Once demands may no longer be made under this Guarantee for any of the reasons specified above, AEMO must return the Guarantee to the Financial Institution.

Executed as a deed poll on **[insert date]**

SIGNED by **[insert name of attorney]** as )  
attorney for **[insert name of Financial )**  
**Institution]** under power of attorney dated )  
**[insert date of power of attorney]** in the )  
presence of: )

Signature of witness )  
)  
)  
)  
Name of witness (block letters) )  
)  
)  
Address of witness )  
)  
)  
Occupation of witness )

By executing this agreement the attorney states that the attorney has received no notice of revocation of the power of attorney

# Reserve Contract (Long Notice)

## Signing page

**SIGNED** by XX )  
as authorised representative for and on )  
behalf of **AUSTRALIAN ENERGY** )  
**MARKET OPERATOR LIMITED** in the )  
presence of: )  
 )  
 )  
..... )  
Signature of witness )  
 )  
 )  
..... )  
Name of witness (block letters) )  
 )  
 )  
..... )  
Address of witness )  
 )  
 )  
 )

**Date signed:** \_\_\_\_\_

.....  
By executing this Agreement the signatory warrants that the signatory is duly authorised to execute this Agreement on behalf of **AUSTRALIAN ENERGY MARKET OPERATOR LIMITED**

**SIGNED** by XX )  
as authorised representative for and on )  
behalf of **xxx** in the presence of: )  
 )  
 )  
..... )  
Signature of witness )  
 )  
 )  
..... )  
Name of witness (block letters) )  
 )  
 )  
..... )  
Address of witness )  
 )  
 )  
 )

**Date signed:** \_\_\_\_\_

.....  
By executing this Agreement the signatory warrants that the signatory is duly authorised to execute this Agreement on behalf of **xxx**