RERT Panel Agreement

Australian Energy Market Operator Limited

and

[name]

RERT Panel Agreement
Contents

RERT Panel Agreement

Details

Parties		
AEMO	Name	**AUSTRALIAN ENERGY MARKET OPERATOR LIMITED**
	ABN	94 072 010 327
	Address	Level 22, 530 Collins Street, Melbourne, Victoria
	Telephone	(03) 9609 8000
	Email	rert@aemo.com.au
	Attention	James Lindley, Group Manager Systems Capability
Reserve Provider	Name	
	ABN	
	Address	
	Telephone	
	Email	
	Attention	
Recitals	A	*AEMO* is responsible for managing the *National Electricity Market* in accordance with the *Rules*.
	B	*AEMO* has selected the *Reserve Provider* to be a member of a *Panel* from whom AEMO may seek tenders for the provision of *short notice reserve* or *medium notice reserve* from time to time.
	C	This Agreement sets out the terms and conditions for a being a panel member and provides a framework for the parties to enter into *reserve contracts* for the provision of *reserve* from time to time.
Governing law	New South Wales	
Date of Agreement	See signing page	

RERT Panel Agreement

Operative Provisions

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*.

"*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*.

"*availability charge*" is specified in **Item 9** of a **Schedule** providing for *medium notice reserve* as amended in accordance with this Agreement or a *reserve contract***.**

"*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 this Agreement commences; and

(b)   the last *billing period* ends when this Agreement 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 4.1**.

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

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

"*conditions subsequent*" for each *reserve* are specified in the **Annexure** to the relevant **Schedule**.

"*Confirmation*" for a particular *reserve contract*, means the confirmation notice for the provision of a particular *reserve* for an agreed period given by *AEMO* to the *Reserve Provider* substantially in the form contained in **Attachment 1** or such other form as *AEMO* requires.

"*contracted levels of performance*" are specified in **Item 6** of each **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 9** of each **Schedule** providing for *medium notice reserve.*

"*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, a *reserve contract, 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 or a *reserve contract*.

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.

"*medium notice reserve*" means the provision of *reserve* in response to a 'medium-notice situation', as that term is described in the *RERT guidelines*.

"*minimum technical requirements*" are specified in **item 6.1** of each **Schedule**.

"*nonavailability charge*" means the amount specified in **Item 9.1(d)** of a **Schedule** providing for *medium notice reserve*.

"*Panel*" means the panel to provide either *short notice reserve or medium notice reserve* (as the case may be) to which the *Reserve Provider* has been appointed by *AEMO*.

"*pre-activation charge*" is specified in **Item 9** 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.

"*Request for Tender*" means a request by *AEMO* to the *Reserve Provider* for *reserve* substantially in the form contained in **Attachment 2** or such other form as *AEMO* requires.

"*reserve*" is described in **item 3** of each **Schedule** as amended in accordance with this Agreement or a *reserve contract*.

"*reserve contract*" means, in respect of a particular *reserve*, the contract governing the provision of that *reserve* created in accordance with **clause 3.2**.

"*reserve equipment*" means any equipment specified in **Item 4** of each **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 Provider*" is specified in the **Details**.

"*Rules*" means the National Electricity Rules.

"*short notice reserve*" means the provision of *reserve* in response to a 'short-notice situation', as that term is described in the *RERT guidelines* and the provision of *reserve* in response to situations where AEMO has less than three hours notice of a projected shortfall in reserves.

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

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

"*usage charges*" are specified in **item 9** of each **Schedule**.

"*Web Portal*" means the Reserve Trading (RERT) web portal accessable 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 in respect of the *reserve* the subject of that **Schedule**, as if the provision was an **Operative Provision**.

1.6   Priority

To the extent of any inconsistency:

(a)   a **Schedule** prevails over the **Operative Provisions**; and

(b)   for a *reserve contract,* the *Confirmation* prevails over this Agreement.

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   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.*

2.2   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.

2.3   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.

2.4   Conditions Subsequent Fulfilment Date

(a)   If any *condition subsequent* applying to a particular *reserve* is not fulfilled by the relevant *condition subsequent fulfilment date* or waived in accordance with **clause 2.3**, *AEMO* may terminate that *reserve* by giving the *Reserve Provider* 3 *business days'* notice.

(b)   If all of the *reserve* is terminated under **paragraph (a)**, the parties agree that this Agreement terminates on the date *AEMO* terminates the last *reserve.*

2.5   Effect of Termination

If a particular *reserve* or this Agreement is terminated under **clause 2.4**, the **Schedule** applicable to that *reserve* or this Agreement (as the case may be) is of no further effect and the parties are released from any further obligation under that **Schedule** or this Agreement (as the case may be) but they remain liable for any breach committed before that termination.

2.6   Survival

If this Agreement is terminated under **clause 2.4**, **clause 2.5** does not affect the rights and obligations of the parties under **clauses 10, 14, 16** and **17.**

3   Panel membership

3.1   Appointment and Acceptance

AEMO appoints the *Reserve Provider* as a member of the *Panel* for provision of *short notice reserve* or *medium notice reserve* (as the case may be) in accordance with this Agreement and the *Reserve Provider* accepts that appointment.

3.2   Creation of *reserve contracts*

(a)   From time to time, *AEMO* may issue a *Request for Tender* to the *Reserve Provider* to provide *short notice reserve* or *medium notice reserve* (as the case may be) for specified periods.

(b)   Subject to clause **5.5** or **Item 2.2**, on receipt of a *Request for Tender* the *Reserve Provider* must use reasonable endeavours to make an offer to provide *reserve* in response to a *Request for Tender.*

(c) Any offer under clause 2.2(b) must be substantially in the form contained in **Attachment 3** to the relevant **Schedule**, or such other form as *AEMO* requires.

(d) The parties agree that if *AEMO* accepts an offer by the *Reserve Provider* to provide *reserve* in response to a *Request for Tender* by sending the *Reserve Provider* a *Confirmation*, a separate *reserve contract* is formed for that *reserve* comprising **clauses 1** to **16** of this Agreement, the relevant **Schedule** and the terms of the *Confirmation*.

3.3 No Obligation to Procure from Panel Members

The *Reserve Provider* acknowledges that:

(a) *AEMO* is not required by anything in this Agreement, any legislation, or requirement of any *government authority* to procure any *reserve* from the *Reserve Provider*, or any other member of the *Panel*; and

(b) this Agreement is not exclusive and *AEMO* may procure *reserve* from persons who are not members of the *Panel*.

4 Term

4.1 Term of this Agreement

(a) This Agreement comes into effect at the time when the last party to execute this Agreement does so.

(b) Subject to **clause 4.2,** and to earlier termination in accordance with this Agreement, this Agreement continues until midnight at the end of the day that is 12 months after the *commencement date.*

4.2 Annual Extension

(a) If, within a month prior to each anniversary of this Agreement:

(i) the *Reserve Provider* has provided notice that the parameters contained in each **Schedule** for the next 12-month period are unchanged; or

(ii) the *Reserve Provider* notifies of a change to the parameters contained in a **Schedule** and, *AEMO* has accepted each change,

this Agreement (with any updated **Schedule** as agreed by *AEMO*) will continue in effect for a further 12 months after the date upon which it would otherwise have expired and, unless further extended under this **paragraph (a)**, this Agreement expires on that date.

(b) Nothing in **clause 4.2** requires the *Reserve Provider* to offer or agree to an extension of this Agreement.

4.3 Period of Reserve Contracts

(a) A *reserve contract* comes into effect on the date specified in the *Confirmation*.

(b) A *reserve contract* continues until the date specified in the *Confirmation*, unless it is terminated earlier in accordance with this Agreement.

5 Provision of Reserve

5.1 Obligation to make the reserve available

If an *availability charge* is payable under a *reserve contract* the *Reserve Provider* must ensure that each *reserve* under that *reserve contract* is *available* at all times during the period of that *reserve contract*.

5.2 Obligation to comply with contracted levels of performance

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.

5.3 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 period for which *reserve* is contracted under a *reserve contract*.

5.4 Requests for Reserve

(a)   During the period for which *reserve* is contracted under a *reserve contract*, *AEMO* may (but is not obliged to) request the *reserve* be provided by the *Reserve Provider* in accordance with **item 8** of the relevant **Schedule**.

(b)   The *Reserve Provider* must comply with a request under **paragraph (a)**.

5.5 Unavailability of Reserve

If, at any time (whether during the currency of a *reserve contract* or otherwise), 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.

5.6 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 a *reserve contract*.

5.7 Third party reserve

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

(i)   offered to the *market* through any other means;

(ii)   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 a *reserve contract*.

(b)   In respect of *reserve* through the reduction of *load*, every 3 months (or earlier on AEMO's request) from the *commencement date* the *Reserve Provider* must provide to *AEMO* an updated list of *NMI*'s and *datastreams* to be used to provide *reserve* in accordance with this Agreement.

6 Measurement and verification

6.1 Measurement

Measurement of each *reserve* provided under a *reserve contract* must be made in accordance with the **Schedule** relevant to each *reserve*, 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 a *reserve contract* using the process contemplated by a relevant **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 a *reserve contract*, the operation and maintenance of *reserve equipment,* any procedures used in the performance of this Agreement or a *reserve contract* and all notices given or received by telephone in relation to this Agreement or a *reserve contract* and*,* in respect of *reserve* through the reduction of *load*, 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.

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 to an 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 or a *reserve contract*.

(b) Where any *reserve equipment* is located on a third party or end user's property, the *Reserve Provider* will use all commercially 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 or a *reserve contract*.

(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) *AEMO* must not carry out any inspection of *reserve equipment* under **clause 7.6** within 6 months of a previous inspection under this Agreement of the same *reserve equipment*.

(b) 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

(a) 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*.

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

(i) ensure that each 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

(ii) 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

(a) 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.*

(b) 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 after entering into a *reserve contract* that could affect the provision of the *reserve* in accordance with that *reserve contract*, the *Reserve Provider* must notify *AEMO* of the need for that maintenance or repair at least:

(i) in the case of *medium notice reserve*, 24 hours; or

(ii) in the case of *short notice reserve,* as soon as possible,

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.

9   Payments

9.1   Calculation of Payments

(a) The *charges* owed by *AEMO* for *reserve* provided under each *reserve contract* are to be determined in accordance with **item 9** of the relevant **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 9** 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 pay the *nonavailability charge* to *AEMO* in the circumstances contemplated in item 9 of the Schedule;

(ii) *AEMO* will suffer loss if the *Reserve Provider* does not provide the *reserve* in accordance with this Agreement and the liquidated damages represented by the *nonavailability charge* payable in the circumstances contemplated in item 9 of the Schedule is to compensate them for that loss;

(iii) the liquidated damages represented by the *nonavailability charge* payable in the circumstances contemplated in item 9 of the Schedule are intended to, and do, represent a reasonable, genuine and good faith pre-estimate of the anticipated or actual loss and damage that the *AEMO* will or may suffer if the *Reserve Provider* does not provide the *reserve* in accordance with this Agreement and are not a penalty;

(iv) it expressly waives the right to the extent permissible to claim or argue, and warrants to *AEMO* that it will not claim or argue, that the *nonavailability charge*

payable in the circumstances contemplated in item 9 of the Schedule is not a genuine pre-estimate of loss or damage; and

(v) if it is determined by a court of competent jurisdiction that the *Reserve Providers* liability to pay the *nonavailability charge* in the circumstances contemplated in item 9 of the Schedule is, is deemed to be or becomes void, voidable or unenforceable in any way so as to disentitle *AEMO* from claiming the *nonavailability charge* in the circumstances contemplated in item 9 of the Schedule or any part of it when due, then *AEMO* is entitled to claim against the *Reserve Provider*, and the *Reserve Provider* agrees to pay to AEMO, damages at law as an alternative to the *nonavailability charge*, which damages are not limited by clause 10.

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 a *reserve contract* until the end of the first *billing period* after the *conditions subsequent* applicable to the *reserve* under that *reserve contract* 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 20th *business day* after the end of the *billing period*; and

(b) the 2nd *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 or a *reserve contract, 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 9.5** 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 9.5** 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 9.5** 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 9.5**, 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 any *reserve contract* or at law, *AEMO* may deduct from any money due to the *Reserve Provider* under this Agreement or

a *reserve contract* 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 or any *reserve contract* 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 or a *reserve contract*. Nothing in **clause 9.7** 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 or a *reserve contract* exclude *GST*.

(b) Where a party is required under this Agreement or a *reserve contract* 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 or a *reserve contract*, 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 9.8**.

(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.

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, all *reserve contracts* and the provision of *reserve* under any of them 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 or a *reserve contract*, 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 or a *reserve contract*;

   (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 or a *reserve contract*, *legislation* or *good electricity industry practice*.

10.2 Reserve Provider Liability Cap

(a) Except for *nonavailability charges* 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, all *reserve contracts* and the provision of the *reserve* under any of them 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 or a *reserve contract*, 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 or a *reserve contract*;

   (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 or a *reserve contract*, *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 or any *reserve contract*.

11 Force majeure

11.1 Effect on performance of obligation

A party's obligation under this Agreement and any *reserve contract* (other than an obligation to pay 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 and any *reserve contract* 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 or a *reserve contract*.

(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.

12 Termination

12.1 Termination for default

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

(a)   the *defaulting party* does not pay any money due under this Agreement or any *reserve contract* 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 or any *reserve contract* 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 or any *reserve contract* 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 or any *reserve contract* 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 more than 80% of the amount specified in an *instruction* for that *trading interval*.

12.3   Termination for convenience

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

(b)   The *Reserve Provider* may terminate this Agreement by giving *AEMO* not less than 90 *business days'* notice, however, no *early termination charge* is payable to the *Reserve Provider* if it terminates this Agreement under this **paragraph (b)**.

12.4   Automatic termination on expiry of RERT scheme

This Agreement, automatically terminates on the date Rule 3.20 expires, unless otherwise provided in the Rules.

12.5   Effect of termination of Agreement on reserve contract

(a)   Any *reserve contract* under this Agreement will terminate effective immediately upon the termination of this Agreement under **clause 12.1, 12.2** or **12.4**.

(b)   Termination of this agreement under **clause 12.3** or the expiry of this Agreement under **clause 4.1(b)** or **4.2(a)**, does does not affect the continuation of any *reserve contract*.

12.6   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.

12.7   Survival

(a)   Expiry or termination of this Agreement or any *reserve contract* 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 or a *reserve contract* 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**.

12.8   Effect of termination

Termination of this Agreement under **clause 12.1** or 1**2.2** also has the effect of terminating all *reserve contracts*.

12.9   Reduction of Reserve

If *AEMO* can terminate a *reserve contract* under **clause 12.1,** or **12.2**, *AEMO* may instead elect to reduce the *reserve* to be provided under the *reserve contract* 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*.

12.10   No other termination

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

13   Assignment and sub-contracting

13.1   Assignment

(a)   The *Reserve Provider* must not *dispose* its rights in this Agreement or any *reserve contract* 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 or any *reserve contract*.

13.2   Sub-contracting

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

14   Dispute resolution

14.1   *Registered Participant* dispute resolution procedure

If the Reserve Provider is a *Registered Participant*:

(a)   If a dispute arises in relation to this Agreement or any *reserve contract*, 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**.

14.2 General dispute resolution procedure

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 or a *reserve contract* ("*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 and any *reserve contract* despite the existence of a *dispute*.

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 and any *reserve contract* are enforceable in accordance with their terms;

    (vii)   if *reserve* is being provided under a *reserve contract*:

        (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 a *reserve contract*; 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 a *reserve contract*; and

    (viii)   the *Reserve Provider* is entitled to carry out its obligations under this Agreement and any *reserve contract*.

(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 and any *reserve contract* are enforceable in accordance with their terms.

16   Compliance with Legislation and the Requirements of an Authority

(a)   Each party must comply with *legislation* in any way affecting this Agreement and any *reserve contract*.

(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 and any *reserve contract* 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.

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*;

  (ii)   request for *reserve* made by *AEMO* and *Confirmations* from *AEMO*;

  (iii)   offers to provide *reserve* in accordance with a *Request for Tender*; or

  (iv)   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 3rd (7th, 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 or a *reserve contract*, 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 or a *reserve contract* 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 or a *reserve contract*, 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 or a *reserve contract* is a continuing obligation, separate and independent from the other obligations of the parties and survives the end of this Agreement or a *reserve contract*.

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 or a *reserve contract*.

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 any *reserve contract* and the transactions contemplated by them (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 or a *reserve contract* is excluded to the extent permitted by law.

17.11 Severability

If a provision of this Agreement or a *reserve contract* is void, unenforceable, or illegal in a jurisdiction, it is severed for that jurisdiction. The remainder of this Agreement or the *reserve contract* 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 the *reserve contract* or is contrary to public policy.

17.12 Entire Agreement

(a) Subject to the *Rules,* this Agreement constitutes the entire agreement of the parties in connection with membership of the Panel and any previous agreements, understandings and negotiations on that subject matter cease to have any effect.

(b) Subject to the *Rules*, each *reserve contract* constitutes the entire agreement of the parties in connection with the supply of *reserve* for the period covered by the *reserve contract* 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 a *reserve contract* or during the negotiations preceding such agreements 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*; and

(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;

(d) as contemplated by for the purpose 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; and

(e) *AEMO* may publish the name of the *Reserve Provider*, the *reserve* volume (MW) and the *term* of this Agreement at the same time as it publishes details of agreements for long notice reserve (being *reserve* in response to a 'long-notice situation', as that term is described in the *RERT guidelines)* in accordance with the *RERT guidelines* 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 or a *reserve contract* it has not relied on any representations or warranties about its subject matter except as provided in this Agreement or the *reserve contract.*

17.15 Counterparts

This Agreement or a *reserve contract* 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 or a *reserve contract* will be the date on which the last counterpart was signed.

17.16 Governing Law & Jurisdiction

This Agreement, each *reserve contract* and the transactions contemplated by them 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 or a *reserve contract*:

(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

Schedule 1 – Medium-Notice Reserve – Scheduled Reserve (Generation Increase)

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 4**.

"*dispatch constraints*" are detailed in the table in **item 5.2**.

"*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 Res*erve 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 4**.

"*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 3**.

"*instruction*" means any notification by *AEMO* to the *Reserve Provider* in respect of the provision of *reserve* in accordance with a *reserve contract*.

"*market capacity*" means the *loading level* specified in **Item 3**, 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 4**.

"NMI Notification Date" means the *Condition Subsequent Fulfimenet Date* specified in the Annexure to this Schedule by which the *Reserve Provider* must notify *AEMO* 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 Tenders for the Provision of Reserve

2.1 Contact Persons for Tenders

Subject to clause 17.1(b), *Requests for Tender* will be given on behalf of *AEMO* and any communications concerning a *Request for Tender* and offers in response to a *Request for Tender,* must be submitted on behalf of the *Reserve Provider* by the persons nominated in the table below:

AEMO	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	James Lindley, Group Manager Systems Capability 07 3347 3906 james.lindley@aemo.com.au
Reserve Provider	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	
Backup Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	

2.2 No obligation to make an offer

The *Reserve Provider* is not obliged to respond to a *Request for Tender* and offer the *reserve* to *AEMO* if the *Request for Tender* relates to a request for *reserve* during the following periods:

Date	Time

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3 Description and quantity of reserve

3.1 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 quantity   MW

3.2 Notice of NMIs

On request from *AEMO*, the *Reserve Provider* must notify *AEMO* of all the *NMI*s 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*.

3.3 Adjustments to *reserve* quantity and *availability charge*

The quantity (MW) of *reserve* specified in the table in item 3.1 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 *reserve* during the period of a *reserve contract*	The quantity of *reserve* provided in response to the test	If the quantity of *reserve* provided in response to the test exceeds 80% of the [required] level, the amount of the *availability charge* specified in the relevant *Confirmation* is amended to a pro rata amount equivalent to the amendment to the	The date on which the *reserve contract* commenced as specified in the relevant *Confirmation*

| | | quantity of *reserve*

Otherwise the *availability charge* is zero. | |
|---|---|---|---|
| If AEMO *instructs* the *Reserve Provider* to provide *reserve* BEFORE 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* | If the quantity of *reserve* provided in response to the *instruction* exceeds 80% of the quantity required in the *instruction*, the amount of the *availability charge* specified in the relevant *Confirmation* is amended to a pro rata amount equivalent to the amendment to the quantity of *reserve*

Otherwise, the *availability charge is zero* and the *Reserve Provider* must repay *AEMO* in accordance with items 6 and 9. | The date on which the *reserve contract* commenced as specified in the relevant *Confirmation* |
| 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* | If the quantity of *reserve* provided in response to the *instruction* exceeds 80% of the quantity required in the *instruction*, the amount of the *availability charge* applicable on the day on which the *instruction* was issued is amended to a pro rata amount equivalent to the amendment to the | The date on which the test was completed or the date on which the *reserve contract* commenced as specified in the relevant *Confirmation*, whichever is the later. |

		quantity of *reserve* Otherwise, the *availability charge is zero* and the *Reserve Provider* must repay *AEMO* in accordance with items 6 and 9.	

For example, where the *reserve* specified in **item 3** 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.

4   Reserve Equipment

Name of Generating Unit:[1]	
Registration Status	[market/non-market]
Location	
Connection Point	
Minimum Operating Level	[ ] MW
Enablement Lead Time	[ ] hours
Disablement Lead Time	[ ] hours
Type of *scheduled generating unit*	[*fast start plant/slow start plant*]

5   Capabilities of Reserve Equipment

5.1   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:

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[1] Copy table and use one for each Generating Unit involved.

Name of Generating Unit[1]				
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

5.2   **Dispatch Constraints**

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

Name of Generating Unit [2]	
Minimum run-time, ie the minimum period the *scheduled generating unit* must *generate.* For the avoidance of doubt, *AEMO* may issue an *instruction* to *disable* the *reserve* while the *reserve* is within the minimum run-time so that the *disablement lead time* and minimum run-time are satisfied concurrently at the end of the minimum run-time.	[ ] hours
Minimum off-time, ie the minimum period between the last time the *scheduled generating unit* was *generating* and the time at which the *scheduled generating unit* can re-commence *generating.*	[ ] hours
Maximum run time, ie the maximum period the *scheduled generating unit* can *generate*.	[ ] hours
Other *dispatch constraints*	

6   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:

6.1   **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 5 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;

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[2] 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.

6.2　**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 5.1**, 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*.

6.3　***Reserve* taken to be not *available***

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

(a)　the quantity of reserve *available* during any *trading interval* (in MW) on the [day/*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 [day/weekday];

(b)　a *dispatch instruction* has been issued for a *trading interval* on the [day/*weekday*] and the *reserve equipment* has been unable to *generate* to more than 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*.

6.4　**Availability notice and advice by the Reserve Provider**

(a)　　**Availability notice**

At all times during a *reserve contract*, 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 MW);

(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.

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

If the *reserve* is taken to be not available under item 6.3 and the *Reserve Provider* had not provided prior notice of unavailability under item 6.4, 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.

7   Requests for Provision of Reserve

7.1   **What AEMO may Request**

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

7.2   **Method of Requests**

(a)   At any time during a *reserve contract*, *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.

7.3   **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	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	Control Room Operator on shift

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

7.4   **Enablement Instruction**

Subject to any *dispatch constraints, AEMO* may issue an *enablement instruction* at any time during a *reserve contract* 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 4** 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.

7.5   **Dispatch Instruction**

Subject to any *dispatch constraints, AEMO* may issue a *dispatch instruction* to the *Reserve Provider* at any time during a *reserve contract* 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 5.1**, unless agreed otherwise between the parties.

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

7.6   **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).

7.7   **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.

8   Measurement and Verification

8.1   **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 *datastream suffixes* 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* prior to the *NMI Notification Date*.

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*.

8.2   **Verification**

AEMO's market systems and energy management systems will be used to verify the quantity of *reserve dispatched* under a *reserve contract*.

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* prior to the *NMI Notification Date*.

9 Charges

9.1 Billing Period

(a) For each *billing period* during a *reserve contract,* the *Reserve Provider* will be entitled to charge *AEMO:*

    (i) subject to paragraphs (b) to (c), an *availability charge*, as set out in a relevant Confirmation for each [day/*weekday*] that the *reserve* is *available* in that *billing period*; and

    (ii) where *reserve* has been *dispatched* during a *trading interval* in accordance with a *reserve contract* during the *billing period*, a *usage charge*, which is equal to the product of the price set out in a relevant *Confirmation* 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 that *reserve contract.*

(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 3.3 and paragraph (c) below.

(c) The *availability charge* is not payable by *AEMO* to the *Reserve Provider* in respect of a [day/weekday] in a *billing period* during which the relevant *reserve* is not *available* including, for the avoidance of doubt, any [day/*weekday*] on which the *reserve* is taken to be not *available* under Items 6.3, 6.4 or 6.5). If the *reserve* is taken to be not available for a period under item 6.5, the *Reserve Provider* must repay *AEMO* any *availability charge* previously paid in respect of that period.

9.2 Early Termination

If the *reserve* specified in that *reserve contract* is terminated by *AEMO* in accordance with **clause 12.3(a)** before the end of a *reserve contract*, the *Reserve Provider* is entitled to charge *AEMO* an *early termination charge,* as set out in a relevant *Confirmation*.

10 Security Payment

10.1 Definitions

In this item 10:

Bank Guarantee means a guanrantee 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:

<div style="margin-left: 2em;">

(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*;

</div>

(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'.

10.2   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.

10.3   Calling on a Guarantee

(a)   On or after a failure by the *Reserve Provider* to repay AEMO under item 9.1(d), *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 10 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 10.

(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.

10.4   No Merger of Rights

(a)   Except as provided by item 10.3(c), an exercise by *AEMO* of its rights under item 10 does not:

  (i)   relieve the *Reserve Provider* of any of its obligations under the *reserve contract*; or

  (ii)   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 10 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.

10.5   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:

  (i)   the date on which the *Reserve Provider* has discharged all payment obligations to *AEMO* under the *reserve contract*; and

  (ii)   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 3** and *condition subsequent fulfilment date* is listed in the table below:

Condition		Condition Subsequent Fulfilment Date
1	The *Reserve Provider* must complete a test of the *enablement*, *dispatch* and *disablement* of the *reserve equipment* under instruction from *AEMO* to *AEMO's* reasonable satisfaction. This test requires the *scheduled generating unit* to perform the following actions in sequence (failure to perform these actions in sequence will constitute a failure to complete this test satisfactorily): • *enable* the *reserve equipment* within the *enablement lead time*; • *generate* at a level above the greater of the *minimum operating level* and the *market capacity*, and in accordance with *dispatch instructions* issued by *AEMO*; and • *disable* under *instructions* from *AEMO* within the *disablement lead time*. During the test: • All automatic *control systems*, for example, the *excitation control system* and *governor system*, must be operated in their automatic regulating mode; • The *reserve equipment* must be operated in a constant and stable manner; and • If *AGC* is installed, the *scheduled generating unit* must be operated under *AGC* control. Trend display printouts of the performance of the *reserve equipment* must be provided to *AEMO* as evidence of completion of this test.	
2	The *Reserve Provider* must notify *AEMO* of all *NMI*'s and *datastream suffixes* related to the provision of *reserve*.	
3	Finalisation of jurisidictional consultation under National Electricity Rules clause 3.20.3(c) and agreement of cost-sharing arrangments under National Electricity Rules clause 3.20.3(f) to the reasonable satisfaction of AEMO.	
4.	[Provision of the Bank Guarantee to AEMO]	

ATTACHMENT TO SCHEDULE 1 – 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

<div align="center">Guarantee</div>

Defined Terms

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

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

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

Occupation of witness

Schedule 2 – Medium-Notice Reserve – Scheduled Reserve (Load Reduction)

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 a *reserve contract*.

"*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 Fulfimenet Date* specified in the Annexure to this Schedule by which the *Reserve Provider* must notify *AEMO* 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.

2 Tenders for the Provision of Reserve

2.1 Contact Persons for Tenders

Subject to clause 17.1(b), *Requests for Tender* will be given on behalf of *AEMO* and any communications concerning a *Request for Tender* and offers in response to a *Request for Tender,* must be submitted on behalf of the *Reserve Provider* by the persons nominated in the table below:

AEMO	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	James Lindley, Group Manager Systems Capability 07 3347 3906 james.lindley@aemo.com.au
Reserve Provider	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	
Backup Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	

2.2 No obligation to make an offer

The *Reserve Provider* is not obliged to respond to a *Request for Tender* and offer the *reserve* to *AEMO* if the *Request for Tender* relates to a request for *reserve* during the following periods:

Date	Time

3   Description and quantity of Reserve

3.1   Reserve description and quantity

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

Location of *reserve*	
Firm capacity	MW
Market capacity	MW

Total Reserve	MW

3.2   Notice of NMIs

On request from *AEMO*, the *Reserve Provider* must notify *AEMO* of all the *NMI*s 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*.

3.3   Adjustments of *reserve* and *availability charge*

The quantity (MW) of *reserve* specified in the table in item 3.1 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 *reserve* during the period of a *reserve contract*	The quantity of *reserve* provided in response to the test	If the quantity of *reserve* provided in response to the test exceeds 80% of the [required] level, the amount of the *availability charge* specified in the relevant *Confirmation* is amended to a pro rata amount equivalent to the amendment to the quantity of *reserve* Otherwise the *availability charge* is zero.	The date on which the *reserve contract* commenced as specified in the relevant *Confirmation*
If AEMO *instructs* the *Reserve Provider* to provide *reserve* BEFORE a test is completed and	The quantity of *reserve* provided	If the quantity of *reserve* provided in	The date on which the *reserve contract*

the *Reserve Provider* supplies less than the amount *instructed* by *AEMO*	in response to the instruction	response to the *instruction* exceeds 80% of the quantity required in the *instruction*, the amount of the *availability charge* specified in the relevant *Confirmation* is amended to a pro rata amount equivalent to the amendment to the quantity of *reserve* Otherwise, the *availability charge is zero* and the *Reserve Provider* must repay *AEMO* in accordance with items 6 and 9.	commenced as specified in the relevant *Confirmation*
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*	If the quantity of *reserve* provided in response to the *instruction* exceeds 80% of the quantity required in the *instruction*, the amount of the *availability charge* 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* Otherwise, the *availability charge is zero* and the *Reserve Provider* must	The date on which the test was completed or the date on which the *reserve contract* commenced as specified in the relevant *Confirmation*, whichever is the later.

		repay *AEMO* in accordance with items 6 and 9.	

For example, where the *reserve* specified in **item 3** 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.

4   Characteristics of Reserve

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

5   Not used

6   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:

6.1   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 5 MW, which may be made up of smaller components that are managed by the *Reserve Provider*;

(c)   The *reserve* must 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*.

6.2 **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*.

6.3 ***Reserve* taken to be not *available***

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

(d) the quantity of reserve *available* during any *trading interval* (in MW) on the [day/*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 [day/weekday];

(e) a *dispatch instruction* has been issued for a *trading interval* on the [day/*weekday*] and the *reserve equipment* has been unable to *generate* to more than 80% of the level requested by the *dispatch instruction* for that *trading interval*; or

(f) 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*.

6.4 **Availability notification by the Reserve Provider**

(a) **Availability notice**

At all times during a *reserve contract*, 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 a*vailable* (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.

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

If the *reserve* is taken to be not available under item 6.3 and the *Reserve Provider* had not provided prior notice of unavailability under item 6.4, 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.

7   Requests for Provision of Reserve

7.1   **What AEMO may Request**

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

7.2   **Method of Requests**

(a)   At any time during a *reserve contract***,** *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.

7.3   **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	
Contact Person at all times:	Control Room Operator on shift
Name/Title:	
Telephone No:	
Email:	
Reserve Provider	
Contact Person at all times:	
Name/Title:	
Telephone No:	
Email:	
Backup Contact Person at all times:	
Name/Title:	

Telephone No: Email:	

7.4 Enablement Instruction

Subject to any *dispatch constraints, AEMO* may issue an *enablement instruction* at any time during a *reserve contract* 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.

7.5 Dispatch Instruction

Subject to any *dispatch constraints, AEMO* may issue a *dispatch instruction* to the *Reserve Provider* at any time during a *reserve contract* 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.

7.6 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).

8   Measurement and Verification of Reserve

8.1 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 *datastream suffixes* used to provide *reserve* under a *reserve contract* within 2 *business days* after *activation*.

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* prior to the *NMI Notification Date*.

The *NMI's* and *datastream suffixes* provided by the *Reserve Provider* to *AEMO* must:

- be *NMI's* and *datastream suffixes* in the Market Settlement and Transfer Solutions (MSATS) system; and

- have actual *interval metering data* (not *estimated metering data* or *substituted metering data*) for all *trading intervals* for at least 100 calendar days prior to day/*weekday* on which *reserve* was *activated* and for the period of *activation*.

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*.

8.2   Verification

AEMO's market systems and energy management systems will be used to verify the quantity of *reserve dispatched* in accordance with a *reserve contract*.

The *Reserve Provider* will not 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* prior to the *NMI Notification Date*.

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.

8.3   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

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

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 100 calendar days immediately preceding the [day/*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**)

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and [days/*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 [day/*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 [day/*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 [100] days not being Activated Days immediately preceding the [day/*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:

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

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.

9 Charges

9.1 Billing Period

(a) For each billing period during a reserve contract, the Reserve Provider will be entitled to charge AEMO:

(i) subject to paragraphs (b) to (c), an *availability charge*, as set out in a relevant *Confirmation* for each [day/*weekday*] that the *reserve* is *available* in that *billing period*; and

(b) (ii) where reserve has been dispatched during a trading interval in accordance with a *reserve contract* during the *billing period*, a *usage charge*, which is equal to the product of the price set out in a relevant *Confirmation* 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 that *reserve contract*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 3.3 and paragraph (c) below.

(c) The *availability charge* is not payable by *AEMO* to the *Reserve Provider* in respect of a [day/*weekday*] in a *billing period* during which the relevant *reserve* is not *available* including, for the avoidance of doubt, any [day/*weekday*] on which the *reserve* is taken to be not *available* under Items 6.3, 6.4 or 6.5). If the *reserve* is taken to be not available for a period under item 6.5, the *Reserve Provider* must repay *AEMO* any *availability charge* previously paid for *reserve* in respect of that period.

9.2 Early Termination

If the *reserve* specified in a *reserve contract* is terminated by *AEMO* in accordance with **clause 12.3(a)** before the end of that *reserve contract*, the *Reserve Provider* is entitled to charge *AEMO* an *early termination charge,* as set out in a relevant *Confirmation*.

10 Security Payment

10.1 Definitions

In this **clause 10**:

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** to this Schedule 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'.

10.2   **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.

10.3   **Calling on a Guarantee**

(a)   On or after a failure by the *Reserve Provider* to repay *AEMO* under clause [xx], *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 clause 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 clause.

(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 a 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.

10.4   **No Merger of Rights**

(a)   Except as provided by clause 10.3(c), an exercise by AEMO of its rights under clause 10 does not:

(i)   relieve the *Reserve Provider* of any of its obligations under the *reserve contract*; or

<blockquote>
(ii)   merge, extinguish, postpone or lessen any right *AEMO* may have against the *Reserve Provider* under the *reserve contract*.
</blockquote>

(b)   An exercise by AEMO of its rights to call on a Bank Guarantee under clause 10 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.

10.5   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:

> (i)   the date on which the *Reserve Provider* has discharged all payment obligations to *AEMO* under the *reserve contract*; and

> (ii)   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	The procedures relevant to the provision of *reserve* that have been accepted by relevant *consumers* must be provided to *AEMO* (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: • *enablement, dispatch* and *disablement*; and • the notifications and responses required by a *reserve contract* for each notification of the *reserve's* availability*,* for each part of the *reserve* that relates to each relevant *consumer*.	
2	The *Reserve Provider* must demonstrate to *AEMO's* reasonable satisfaction that the required notifications can be provided to the operator of each part of the *reserve* in sufficient time to allow the *reserve* to be *dispatched* in accordance with the *contracted levels of performance*. *Dispatch* is not required as part of this demonstration.	
3	The *Reserve Provider* must complete a test of the *enablement*, *dispatch* and *disablement* of the *reserve* under instruction from *AEMO* to *AEMO's* reasonable satisfaction. This test requires the *Reserve Provider* to perform the following actions in sequence (failure to perform these actions in sequence will constitute a failure to complete this test satisfactorily): • *enable* the *reserve* within the *enablement lead time*; • provide *load reduction* at a level in accordance with *dispatch instructions* issued by *AEMO*; and • *disable* under *instructions* from *AEMO* within the *disablement lead time*.	
4	The *Reserve Provider* must notify *AEMO* of all *NMI*'s and *datastream suffixes* related to the provision of *reserve*.	
5.	Finalisation of jurisidictional consultation under National Electricity Rules clause 3.20.3(c) and agreement of cost-sharing arrangments under National Electricity Rules clause 3.20.3(f) to the reasonable satisfaction of AEMO.	
6.	[Provision of the Bank Guarantee to AEMO]	

ATTACHMENT TO SCHEDULE 2 – 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

<div align="center">

Guarantee

</div>

Defined Terms

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

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

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
)

Schedule 3 – Medium-Notice Reserve – Unscheduled Reserve (Generation Increase)

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 *de-activate* 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 a *reserve contract*.

"*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.**

"*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 Tenders for the Provision of Reserve

2.1 Contact Persons for Tenders

Subject to clause 17.1(b), *Requests for Tender* will be given on behalf of *AEMO* and any communications concerning a *Request for Tender* and offers in response to a *Request for Tender,* must be submitted on behalf of the *Reserve Provider* by the persons nominated in the table below:

AEMO	
Contact Person at all times:	
Name/Title:	James Lindley, Group Manager Systems Capability
	07 3347 3906
Telephone No:	james.lindley@aemo.com.au
Email:	
Reserve Provider	
Contact Person at all times:	
Name/Title:	
Telephone No:	
Email:	
Backup Contact Person at all times:	
Name/Title:	
Telephone No:	
Email:	

2.2 No obligation to make an offer

The *Reserve Provider* is not obliged to respond to a *Request for Tender* and offer the *reserve* to *AEMO* if the *Request for Tender* relates to a request for *reserve* during the following periods:

Date	Time

3 Description and quantity of Reserve

3.1 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

3.2   Notice of NMIs

On request from *AEMO*, the *Reserve Provider* must notify *AEMO* of all the *NMI*s 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*.

3.3   Adjustments of *reserve* and *availability charge*

The quantity (MW) of *reserve* specified in the table in item 3.1 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 *reserve* during the period of a *reserve contract*	The quantity of *reserve* provided in response to the test	If the quantity of *reserve* provided in response to the test exceeds 80% of the [required] level, the amount of the *availability charge* specified in the relevant *Confirmation* is amended to a pro rata amount equivalent to the amendment to the quantity of *reserve.* Otherwise the *availability charge* is zero.	The date on which the *reserve contract* commenced as specified in the relevant *Confirmation*
If AEMO *instructs* the *Reserve Provider* to provide *reserve* BEFORE a test is completed and the *Reserve Provider* supplies	The quantity of *reserve* provided	If the quantity of *reserve* provided in response to the *instruction*	The date on which the *reserve contract* commenced as

less than the amount *instructed* by *AEMO*	in response to the instruction	exceeds 80% of the quantity required in the *instruction*, the amount of the *availability charge* specified in the relevant *Confirmation* is amended to a pro rata amount equivalent to the amendment to the quantity of *reserve.* Otherwise, the *availability charge is zero* and the *Reserve Provider* must repay *AEMO* in accordance with items 6 and 9*.*	specified in the relevant *Confirmation*
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*	If the quantity of *reserve* provided in response to the *instruction* exceeds 80% of the quantity required in the *instruction*, the amount of the *availability charge* 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.* Otherwise, the *availability charge is zero* and the *Reserve Provider* must repay *AEMO* in accordance with items 6 and 9*.*	The date on which the test was completed or the date on which the *reserve contract* commenced as specified in the relevant *Confirmation*, whichever is the later.

For example, where the *reserve* specified in **item 3** 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.

4   Reserve Equipment

Name of Generating Unit[3]	
Registration Status	[market/non-market]
Location	
Connection Point	
Minimum Operating Level	[ ] MW
Pre-activation Lead Time	[ ] hours
Activation Lead Time	[ ] hours
De-Activation Lead Time	[ ] hours

5   Capabilities of Reserve Equipment

5.1   Activation Constraints

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

Name of Generating Unit[3]	
Minimum run-time, ie the minimum period the *scheduled generating unit* must *generate.* For the avoidance of doubt, *AEMO* may issue an *instruction* to *de-activate* the *reserve* while the *reserve* is within the minimum run-time so that the *de-activation lead time* and minimum run-time are satisfied concurrently at the end of the minimum run-time.	[ ] hours
Minimum off-time, ie the minimum period between the last time the *scheduled generating unit* was *generating* and the time at which the *scheduled generating unit* can re-commence *generating.*	[ ] hours

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[3] Copy table and use one for each Generating Unit involved.

Maximum run time, ie the maximum period the *scheduled generating unit* can *generate*.	[ ] hours
Other *activation constraints*	

6 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:

6.1 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 5 MW, which may be made up of smaller components that are managed by the *Reserve Provider*;

(c) The *reserve* must 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.

6.2 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*.

6.3 *Reserve* taken to be not *available*

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

(g) the quantity of reserve *available* during any *trading interval* (in MW) on the [day/*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 [day/*weekday*];

(h) a *dispatch instruction* has been issued for a *trading interval* on the [day/*weekday*] and the *reserve equipment* has been unable to *generate* to more than 80% of the level requested by the *dispatch instruction* for that *trading interval*; or

(i) 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*.

6.4 Availability notice and advice by the Reserve Provider

(a) **Availability notice**

At all times during a *reserve contract*, 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 MW);

(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.

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

If the *reserve* is taken to be not available under item 6.3 and the *Reserve Provider* had not provided prior notice of unavailability under item 6.4, 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.

7   Requests for Provision of Reserve

7.1   **What AEMO may Request**

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

7.2 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.

7.3 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	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	Control Room Operator on shift
Reserve Provider	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	
Backup Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	

7.4 Pre-Activation Instruction

Subject to any *activation constraints*, *AEMO* may issue a *pre-activation instruction* at any time during a *reserve contract* 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.

7.5 Activation Instruction

Subject to any *activation constraints*, *AEMO* may issue an *activation instruction* to the *Reserve Provider* at any time during a *reserve contract* 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.

7.6   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.

7.7   Terminating *activation 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).

8   Measurement and Verification

8.1   Measurement

Actual *interval 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* 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* prior to the *NMI Notification Date*.

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*.

8.2   Verification

AEMO's market systems and energy management systems will be used to verify the quantity of *reserve activated* in accordance with a *reserve contract*.

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.

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* prior to the *NMI Notification Date*.

9 Charges

9.1 Billing Period

(a)   For each *billing period,* the *Reserve Provider* will be entitled to charge *AEMO*

   (i)   subject to paragraphs (b) and (c), an *availability charge*, as set out in a relevant *Confirmation* for each [day/*weekday*] that the *reserve* is *available* in that *billing period;*

   (ii)   subject to the *reserve* being *available* if *activated* for the [day/*weekday*] for which the *pre-activation charge* relates, a *pre-activation charge* equal to product of the price for *pre-activating* as set out in a relevant *Confirmation* 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 a *reserve contract* during the *billing period*, a *usage charge,* which is equal to the product of the price set out in a relevant *Confirmation*, 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 a *reserve contract*.

(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 3.3 and paragraph (c) below.

(c)   The *availability charge* is not payable by *AEMO* to the *Reserve Provider* in respect of a [day/*weekday*] in a *billing period* during which the relevant *reserve* is not *available* (including, for the avoidance of doubt, any [day/*weekday*] on which the *reserve* is taken to be not *available* under Items 6.3, 6.4 or 6.5). If the *reserve* is taken to be not available for a period under item 6.5, the *Reserve Provider* must repay *AEMO* any *availability charge* previously paid in respect of that period.

9.2 Early Termination

If the *reserve* specified in that *reserve contract* is terminated by *AEMO* in accordance with **clause 12.3(a)** before the end of the *reserve contract*, the *Reserve Provider* is entitled to charge *AEMO* an *early termination charge,* as set out in a relevant *Confirmation*.

10 Security Payment

10.1 Definitions

In this item 10:

Bank Guarantee means a guanrantee 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'.

10.2   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.

10.3   Calling on a Guarantee

(a)   On or after a failure by the *Reserve Provider* to repay AEMO under item 9.1(d), *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 10 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 10.

(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.

10.4   No Merger of Rights

(a)   Except as provided by item 10.3(c), an exercise by *AEMO* of its rights under item 10 does not:

    (i)   relieve the *Reserve Provider* of any of its obligations under the *reserve contract*; or

    (ii) 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 10 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.

10.5   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:

    (i)   the date on which the *Reserve Provider* has discharged all payment obligations to *AEMO* under the *reserve contract*; and

    (ii) 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
1	The *Reserve Provider* must complete a test of the *pre-activation, activation* and *de-activation* of the *reserve equipment* under *instruction* from *AEMO* to *AEMO's* reasonable satisfaction. This test requires the *reserve equipment* to perform the following actions in sequence (failure to perform these actions in sequence will constitute a failure to complete this test satisfactorily): • *pre-activate* the *reserve equipment* within the *pre-activation lead time*; • *generate* at a level above the greater of the *minimum operating level* and the *market capacity*, and in accordance with *activation instructions* issued by *AEMO*; and • *de-activate* under *instructions* from *AEMO* within the *de-activation lead time*. During the test: • All automatic *control systems*, for example, the *excitation control system* and *governor system*, must be operated in their automatic regulating mode; • The *reserve equipment* must be operated in a constant and stable manner; and • If *AGC* is installed, the *reserve equipment* must be operated under *AGC* control. Trend display printouts of the performance of the *reserve equipment* must be provided to *AEMO* as evidence of completion of this test.	
2	The *Reserve Provider* must complete a test of the notifications and procedures used to provide the *reserve* in accordance with the *contracted levels of performance*. The *Reserve Provider* must demonstrate how the *Reserve Provider* would comply with a *pre-activation instruction* and an *activation instruction*, but these actions are not required for this test.	
3	The *Reserve Provider* must notify *AEMO* of all *NMI*'s and *datastream suffixes* related to the provision of *reserve*.	
4.	Finalisation of jurisidictional consultation under National Electricity Rules clause 3.20.3(c) and agreement of cost-sharing arrangments under National Electricity Rules clause 3.20.3(f) to the reasonable satisfaction of AEMO.	
5.	[Provision of the Bank Guarantee to AEMO]	

ATTACHMENT TO SCHEDULE 3 – 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

<div align="center">Guarantee</div>

Defined Terms

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

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

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)   )

)

)

)   By executing this agreement the attorney

Address of witness   )   states that the attorney has received no

)   notice of revocation of the power of attorney

)

Occupation of witness

Schedule 4 – Medium-Notice Reserve – 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 a *reserve contract*.

"*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 Fulfimenet Date* specified in the Annexure to this Schedule by which the *Reserve Provider* must notify *AEMO* 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.

2   Tenders for the Provision of Reserve

2.1   Contact Persons for Tenders

Subject to clause 17.1(b), *Requests for Tender* will be given on behalf of *AEMO* and any communications concerning a *Request for Tender* and offers in response to a *Request for Tender,* must be submitted on behalf of the *Reserve Provider* by the persons nominated in the table below:

AEMO	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	 James Lindley, Group ManagerSystems Capability 07 3347 3906 james.lindley@aemo.com.au
Reserve Provider	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	
Backup Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	

2.2   No obligation to make an offer

The *Reserve Provider* is not obliged to respond to a *Request for Tender* and offer the *reserve* to *AEMO* if the *Request for Tender* relates to a request for *reserve* during the following periods:

Date	Time

3 Description and quantity of Reserve

3.1 Reserve description and quantity

The *reserve* comprises the provision 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*)	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								

Total *Reserve*	MW

3.2   Notice of NMIs

On request from *AEMO*, the *Reserve Provider* must notify *AEMO* of all the *NMI*s 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*.

3.3   Adjustments of *reserve* and *availability charge*

The quantity (MW) of *reserve* specified in the table in item 3.1 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 *reserve* during the period of a *reserve contract*	The quantity of *reserve* provided in response to the test	If the quantity of *reserve* provided in response to the test exceeds 80% of the [required] level, the amount of the *availability charge* specified in the relevant *Confirmation* is amended to a pro rata amount equivalent to the amendment to the quantity of *reserve.* Otherwise the *availability charge* is zero.	The date on which the *reserve contract* commenced as specified in the relevant *Confirmation*
If AEMO *instructs* the *Reserve Provider* to provide *reserve* BEFORE 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	If the quantity of *reserve* provided in response to the *instruction* exceeds 80% of the quantity required in the *instruction*, the amount of the *availability charge* specified in the relevant *Confirmation* is amended to a pro rata amount equivalent to the	The date on which the *reserve contract* commenced as specified in the relevant *Confirmation*

		amendment to the quantity of *reserve.* Otherwise, the *availability charge is zero* and the *Reserve Provider* must repay *AEMO* in accordance with items 6 and 9*.*	
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*	If the quantity of *reserve* provided in response to the *instruction* exceeds 80% of the quantity required in the *instruction*, the amount of the *availability charge* 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.* Otherwise, the *availability charge is zero* and the *Reserve Provider* must repay *AEMO* in accordance with items 6 and 9*.*	The date on which the test was completed or the date on which the *reserve contract* commenced as specified in the relevant *Confirmation*, whichever is the later.

For example, where the *reserve* specified in **item 3** 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.

4   Characteristics of Reserve

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

5   Not used

6   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:

6.1   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 5 MW, which may be made up of smaller components that are managed by the *Reserve Provider*;

(c)   The *reserve* must 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.

6.2   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*.

6.3   **Reserve taken to be not *available***

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

(j)   the quantity of reserve *available* during any *trading interval* (in MW) on the [day/*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 [day/*weekday*];

(k)   a *dispatch instruction* has been issued for a *trading interval* on the [day/*weekday*] and the *reserve equipment* has been unable to *generate* to more than 80% of the level requested by the *dispatch instruction* for that *trading interval*; or

(l)   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*.

6.4   **Availability notice and advice by the Reserve Provider**

(a)   **Availability notice**

At all times during a *reserve contract*, 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 a*vailable* (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.

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

If the *reserve* is taken to be not available under item 6.3 and the *Reserve Provider* had not provided prior notice of unavailability under item 6.4, 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.

7   Requests for Provision of Reserve

7.1   What AEMO may Request

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

7.2   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.

7.3   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	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	Control Room Operator on shift
Reserve Provider	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	
Backup Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	

7.4   Pre-Activation Instruction

Subject to any *activation constraints*, *AEMO* may issue a *pre-activation instruction* at any time during a *reserve contract* 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.

7.5   Activation Instruction

Subject to any *activation constraints*, *AEMO* may issue an *activation instruction* to the *Reserve Provider* at any time during a *reserve contract* 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 level specified in the relevant *Day Ahead Availability Notice* for that *reserve* and *trading interval.*

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

7.6   De-activation

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

7.7   Terminating *activation 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).

8   Measurement and Verification

8.1   Measurement

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

(a)   Actual *interval 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 *datastream suffixes* used to provide *reserve* under a *reserve contract* 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* prior to the *NMI Notification Date*.

(d)   The *NMI's* and *datastream suffixes* provided by the *Reserve Provider* to *AEMO* must:

- be *NMI's* and *datastream suffixes* in the Market Settlement and Transfer Solutions (MSATS) system; and

- have actual *interval metering data* (not *estimated metering data* or *substituted metering data*) for all *trading intervals* for at least 100 calendar days prior to [day/*weekday*] on which *reserve* was *activated* and for the period of *activation*.

(e)   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*).

8.2   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 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* 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.

8.3   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

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

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 100 calendar days immediately preceding the [day/*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 [days/*weekdays*] on which *reserve* was not *activated* (the **Non-Activated Days**) and [days/*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 [day/*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 [day/*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 [100] days not being Activated Days immediately preceding the [day/*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:

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

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.

9 Charges

9.1 Billing Period

(a) For each *billing period,* the *Reserve Provider* will be entitled to charge *AEMO*:

    (i) subject to paragraphs (b) and (c), an *availability charge*, as set out in a relevant *Confirmation* for each [day/*weekday*] that the *reserve* is *available* in that *billing period*;

    (ii) subject to the *reserve* being available if *activated* for the [day/*weekday*] for which the *pre-activation charge* relates, a *pre-activation charge* equal to product of the price for *pre-activating* as set out in a relevant *Confirmation* 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 a *reserve contract* during the *billing period*, a *usage charge* equal to the product of the price for usage set out in a relevant *Confirmation*, and the quantity (in MWh) of the *reserve activated* as measured, verified and calculated in accordance with the relevant *reserve contract*.

(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 3.3 and paragraph (c) below.

(c) The *availability charge* is not payable by *AEMO* to the *Reserve Provider* in respect of a [day/*weekday*] in a *billing period* during which the relevant *reserve* is not *available* (including, for the avoidance of doubt, any [day/*weekday*] on which the *reserve* is taken to be not *available* under Items 6.3, 6.4 or 6.5). If the *reserve* is taken to be not available for a period under item 6.5, the *Reserve Provider* must repay *AEMO* any *availability charge* previously paid in respect of that period.

9.2 Early Termination

If the *reserve* specified in a *reserve contract* is terminated by *AEMO* in accordance with **clause 12.3(a)** before the end of that *reserve contract*, the *Reserve Provider* will be entitled to charge *AEMO* an *early termination charge* as set out in a relevant *Confirmation*.

10 Security Payment

10.1 Definitions

In this item 10:

Bank Guarantee means a guanrantee 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'.

10.2 **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.

10.3 **Calling on a Guarantee**

(a) On or after a failure by the *Reserve Provider* to repay AEMO under item 9.1(d), *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 10 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 10.

(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.

10.4   No Merger of Rights

(a)   Except as provided by item 10.3(c), an exercise by *AEMO* of its rights under item 10 does not:

> (i)   relieve the *Reserve Provider* of any of its obligations under the *reserve contract*; or

> (ii)   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 10 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.

10.5   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:

> (i)   the date on which the *Reserve Provider* has discharged all payment obligations to *AEMO* under the *reserve contract*; and

> (ii)   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
1	The procedures relevant to the provision of *reserve* that have been accepted by relevant *consumers* must be provided to *AEMO* (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: • *pre-activation, activation* and *de-activation* of that part of the *reserve*; and • the notifications and responses required for each notification of the *reserve's* availability, for each part of the *reserve* that relates to each relevant *consumer*.	
2	The *Reserve Provider* must demonstrate to AEMO's reasonable satisfaction that the required notifications can be provided to the operator of each part of the *reserve* in sufficient time to allow the *reserve* to be *activated* in accordance with the *contracted levels of performance*. *Pre-activation* and *activation* are not required as part of this demonstration.	
3	Where the provision of *reserve* relies on *standby generation* being available to supply the *load disconnected* from the *network*, the Reserve Provider must provide *AEMO* with test certificates or other evidence of satisfactory starts of each *standby generating unit,* indicating that the prime mover and energisation of the alternator of each *standby generating unit* were started recently without fail and the *standby generating unit* must *generate* electricity for at least 1 hour. The evidence to be provided to *AEMO* must indicate that each *standby generating unit* was tested within 30 days of the date of provision of the evidence to *AEMO*.	
4	The *Reserve Provider* must complete a test of the *pre-activation*, *activation* and *de-activation* of the *reserve* under instruction from *AEMO* to *AEMO's* reasonable satisfaction. This test requires the *Reserve Provider* to perform the following actions in sequence (failure to perform these actions in sequence will constitute a failure to complete this test satisfactorily): • *pre-activate* the *reserve* within the *pre-activation lead time*; • provide *load reduction* at a level in accordance with *activation instructions* issued by *AEMO*; and • *de-activate* under *instructions* from *AEMO* within the *de-activation lead time*.	
5	The *Reserve Provider* must notify *AEMO* of all *NMI*'s and *datastream suffixes* related to the provision of *reserve*.	
6.	Finalisation of jurisidictional 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.	
7.	[Provision of the Bank Guarantee to AEMO]	

ATTACHMENT TO SCHEDULE 4 – 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

<div align="center">Guarantee</div>

Defined Terms

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

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

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

)
)
)
)

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

Occupation of witness

Attachment 1 to Schedule 1, 2, 3 & 4 – Confirmation

[on AEMO letterhead]

To the Reserve Provider [name/address as per relevant Schedule]

Re | Confirmation of Reserve Contract

This is a *Confirmation* under clause XX of the RERT Panel Agreement dated xxx ("Agreement").

AEMO confirms your agreement to provide the following *reserve* for the following charges:

Period of *reserve contract*:	(*AEMO* will complete)
Date(s) *reserve* is available:	(*AEMO* will complete)
Time(s) *reserve* is available (*EST*):	(*AEMO* will complete)
Quantity of available *reserve*:	(*AEMO* will complete)
Location of available *reserve*:[4]	(*AEMO* will complete)
Availability charge:[5]	$ (*AEMO* will complete)
Usage charge:	$ (*AEMO* will complete)/MWh
Pre-activation charge:[6]	$ (*AEMO* will complete) per *pre-activation instruction*

This *Confirmation* incorporates clauses 1 and 3 to 17 of the Agreement and Schedule X, which collectively become a *reserve contract*.

Italicised terms are defined in the Agreement.

Dated:

Signed by XX in accordance with the Agreement.

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[4] Applicable only if the reserve relates to load reduction and reserve offered is not all of the load reduction described in the relevant schedule – delete this row if this applies and this footnote.

[5] This should be specified as an amount for each [day/*weekday*] during the dates the *reserve* is available.

[6] Applicable only if the reserve is unscheduled – delete this row if scheduled reserve and this footnote.

Attachment 2 to Schedule 1, 2, 3 & 4 – Request for Tender

[on AEMO letterhead]

To the Reserve Provider [name/address as per relevant Schedule]

Re | Request for Tender

This is a *Request for Tender* under clause 4.2 of the RERT Panel Agreement dated xxx ("Agreement"). *AEMO* requests your tender for the provision of *reserve* as follows:

Date(s) *reserve* is required:	(*AEMO* will complete)
Time(s) *reserve* is required (*EST*):	(*AEMO* will complete)
Commencement and completion dates of proposed *reserve contract*:	(*AEMO* will complete)
Quantity of *reserve* required:	(*AEMO* will complete)
Location of *reserve* required:[7]	(*AEMO* will complete)

Your tender is required by XXam/pm[8] EDST on [insert date] on the form of tender attached. If you fail to submit a tender by this date and time, *AEMO* will assume that you do not wish to submit a tender.

Note that if your tender is accepted by *AEMO*, *AEMO* will send you a *Confirmation*, whereupon a *reserve contract* will be entered into that will incorporate the terms contained in the *Confirmation* and clauses 1 and 3 to 17 of the Agreement and Schedule X.

Italicised terms are defined in the Agreement.

Dated:

Signed by XX in accordance with the Agreement.

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[7]   Applicable only if the reserve relates to load reduction and reserve offered is not all of the load reduction described in the relevant schedule – delete this row if this applies and this footnote.

[8]   Delete whichever is inapplicable.

Attachment 3 to Schedule 1, 2, 3 & 4 – Form of Tender

[on Reserve Provider letterhead]

To AEMO[name/address as per relevant Schedule]:

Re | Tender for the Provision of Reserve

In response to your Request for Tender dated xxx, we offer to provide the following reserve:

Date(s) *reserve* is available:	(*Reserve Provider* to complete)
Time(s) *reserve* is available (*EST*):	(*Reserve Provider* to complete)
Quantity of available *reserve*:	(*Reserve Provider* to complete)
Location of available *reserve*:[9]	(*Reserve Provider* to complete)
Availability charge:[10]	$ (*Reserve Provider* to complete)
Usage charge:	$ (*Reserve Provider* to complete)/MWh
Pre-activation charge:[11]	$ (*Reserve Provider* to complete) per *pre-activation instruction*

We confirm that the *reserve* being offered to *AEMO* is not already contracted for the period covered by this offer and will not otherwise be made available through *central dispatch*.

We also confirm that if our tender is accepted by *AEMO*, *AEMO* will send us a *Confirmation*, whereupon a *reserve contract* will be entered into that will incorporate the terms contained in the *Confirmation* and clauses 1 and 3 to 17 of the Agreement and Schedule X.

Italicised terms are defined in the Agreement.

Dated:

Signed by XX in accordance with the Agreement.

---

[9]   Applicable only if the reserve relates to load reduction and reserve offered is not all of the load reduction described in the relevant schedule – delete this row if this applies and this footnote.

[10]   This should be specified as an amount for each [day/*weekday*] during the dates the *reserve* is available.

[11]   Applicable only if the reserve is unscheduled – delete this row if scheduled reserve and this footnote.

Schedule 5 – Short-Notice Reserve – Scheduled Reserve (Generation Increase)

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 4**.

"*dispatch constraints*" are detailed in the table in **item 5.2**.

"*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 Res*erve 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 4**.

"*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 3**.

"*instruction*" means any notification by *AEMO* to the *Reserve Provider* in respect of the provision of *reserve* in accordance with a *reserve contract*.

"*market capacity*" means the *loading level* specified in **Item 3**, 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 4**.

"NMI Notification Date" means the *Condition Subsequent Fulfimenet Date* specified in the Annexure to this Schedule by which the *Reserve Provider* must notify *AEMO* 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   Tenders for the Provision of Reserve

2.1   Contact Persons for Tenders

Subject to clause 17.1(b), *Requests for Tender* will be given on behalf of *AEMO* and any communications concerning a *Request for Tender* and offers in response to a *Request for Tender,* must be submitted on behalf of the *Reserve Provider* by the persons nominated in the table below:

AEMO	
Contact Person at all times: **Name/Title:** **Telephone No:** **Fax No:** **Email:**	Control Room Manager
Reserve Provider	
Contact Person at all times: **Name/Title:** **Telephone No:** **Fax No:** **Email:**	
Backup Contact Person at all times: **Name/Title:** **Telephone No:** **Fax No:** **Email:**	

2.2   No obligation to make an offer

The *Reserve Provider* is not obliged to respond to a *Request for Tender* and offer the *reserve* to *AEMO* if the *Request for Tender* relates to a request for *reserve* during the following periods:

Date	Time

3   Description of Reserve

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

4   Reserve Equipment

Name of Generating Unit:[12]	
Registration Status	[market/non-market]
Location	
Connection Point	
Minimum Operating Level	[ ] MW
Enablement Lead Time	[ ] hours
Disablement Lead Time	[ ] hours
Type of *scheduled generating unit*	[*fast start plant/slow start plant*]

5   Capabilities of Reserve Equipment

5.1   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:

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[12] Copy table and use one for each Generating Unit involved.

Name of Generating Unit [13]				
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

5.2 Dispatch Constraints

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

Name of Generating Unit [13]	
Minimum run-time, i.e. the minimum period the *scheduled generating unit* must *generate.* For the avoidance of doubt, *AEMO* may issue an *instruction* to *disable* the *reserve* while the *reserve* is within the minimum run-time so that the *disablement lead time* and minimum run-time are satisfied concurrently at the end of the minimum run-time.	[ ] hours
Minimum off-time, i.e. the minimum period between the last time the *scheduled generating unit* was *generating* and the time at which the *scheduled generating unit* can re-commence *generating.*	[ ] hours
Other *dispatch constraints*	

6 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:

6.1 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 5 MW, which may be made up of smaller components that are managed by the *Reserve Provider*;

(c) The *reserve* must capable of remaining *dispatched* 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*

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[13] Copy table and use one for each Generating Unit involved.

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.

6.2   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 5.1**, 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*.

6.3   Availability notification by the Reserve Provider

At all times during a *reserve contract*, 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]

If the *Reserve Provider* becomes aware of a material change to the availability of *reserve* following the entry into a *reserve contract*, the *Reserve Provider* must as soon as practicable after becoming aware of it advise *AEMO*.

7   Requests for Provision of Reserve

7.1   What AEMO may Request

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

7.2   Method of Requests

(a)   At any time during a *reserve contract*, *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.

7.3   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	
Contact Person at all times:	
Name/Title:	Control Room Operator on shift

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

7.4 Enablement Instruction

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

(a) *synchronise* and increase *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 4** 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.

7.5 Dispatch Instruction

Subject to any *dispatch constraints, AEMO* may issue a *dispatch instruction* to the *Reserve Provider* at any time during a *reserve contract* 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*; and

(d) must not require the *reserve equipment* to change its level of *generation* at rates of change greater than those specified in **Item 5.1**, unless agreed otherwise between the parties.

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

7.6   **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).

7.7   **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.

8   Measurement and Verification

8.1   **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*.

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* prior to the *NMI Notification Date*.

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*.

8.2   **Verification**

AEMO's market systems and energy management systems will be used to verify the quantity of *reserve dispatched* under a *reserve contract*.

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* prior to the *NMI Notification Date*.

9   Charges

9.1   **Billing Period**

For each *billing period* during a *reserve contract,* the *Reserve Provider* will be entitled to charge *AEMO* where *reserve* has been *dispatched* during a *trading interval* in accordance with a *reserve contract* during the *billing period*, a *usage charge*, which is equal to the

product of $XX 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 that *reserve contract.*

Annexure to Schedule 5 - 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	The *Reserve Provider* must complete a test of the *enablement*, *dispatch* and *disablement* of the *reserve equipment* under instruction from *AEMO* to *AEMO's* reasonable satisfaction. This test requires the *scheduled generating unit* to perform the following actions in sequence (failure to perform these actions in sequence will constitute a failure to complete this test satisfactorily): • *enable* the *reserve equipment* within the *enablement lead time*; • *generate* at a level above the greater of the *minimum operating level* and the *market capacity*, and in accordance with *dispatch instructions* issued by *AEMO*; and • *disable* under instructions from *AEMO* within the *disablement lead time*. During the test: • All automatic *control systems*, for example, the *excitation control system* and *governor system*, must be operated in their automatic regulating mode; • The *reserve equipment* must be operated in a constant and stable manner; and • If *AGC* is installed, the *scheduled generating unit* must be operated under *AGC* control. Trend display printouts of the performance of the *reserve equipment* must be provided to *AEMO* as evidence of completion of this test.	
2	The *Reserve Provider* must notify *AEMO* of all *NMI*'s and *datastream suffixes* related to the provision of *reserve*.	
	Finalisation of jurisidictional consultation under National Electricity Rules clause 3.20.3(c) and agreement of cost-sharing arrangments under National Electricity Rules clause 3.20.3(f) to the reasonable satisfaction of AEMO.	

Schedule 6 – Short-Notice Reserve – Scheduled Reserve (Load Reduction)

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 a *reserve contract*.

"*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 Fulfimenet Date* specified in the Annexure to this Schedule by which the *Reserve Provider* must notify *AEMO* 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.

2 Tenders for the Provision of Reserve

2.1 Contact Persons for Tenders

Subject to clause 17.1(b), *Requests for Tender* will be given on behalf of *AEMO* and any communications concerning a *Request for Tender* and offers in response to a *Request for Tender,* must be submitted on behalf of the *Reserve Provider* by the persons nominated in the table below:

AEMO	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	Control Room Manager
Reserve Provider	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	
Backup Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	

2.2 No obligation to make an offer

The *Reserve Provider* is not obliged to respond to a *Request for Tender* and offer the *reserve* to *AEMO* if the *Request for Tender* relates to a request for *reserve* during the following periods:

Date	Time

3 Description of Reserve

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

Location of *reserve*	
Firm capacity	MW
Market capacity	MW

Total Reserve	MW

4 Characteristics of Reserve

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

5 Not used

6 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:

6.1 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 5 MW, which may be made up of smaller components that are managed by the *Reserve Provider*; and

(c) The *reserve* must capable of remaining *dispatched* for at least 1 hour.

(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.

6.2   **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*; and

(d)   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*.

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 owned by a *consumer* unless this effect has been deducted from the *reserve*.

6.3   **Availability notification by the Reserve Provider**

At all times during a *reserve contract*, 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]

If the *Reserve Provider* becomes aware of a material change of circumstances following the entry into a *reserve contract*, the *Reserve Provider* must as soon as practicable after becoming aware of it advise *AEMO*.

7   Requests for Provision of Reserve

7.1   **What AEMO may Request**

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

7.2   **Method of Requests**

(a)   At any time during a *reserve contract*, *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.

7.3   **Contact Persons for Operational Purposes**

Subject to clause17.1(b), *instructions* will be given and received and communications concerning *instructions* must be made by the following persons on behalf of each party:

AEMO

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

7.4   Enablement Instruction

Subject to any *dispatch constraints, AEMO* may issue an *enablement instruction* at any time during a *reserve contract* 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.

7.5   Dispatch Instruction

Subject to any *dispatch constraints, AEMO* may issue a *dispatch instruction* to the *Reserve Provider* at any time during a *reserve contract* 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.

7.6 **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).

8   Measurement and Verification of Reserve

8.1   **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 *datastream suffixes* used to provide *reserve* under a *reserve contract* within 2 *business days* after *activation*.

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* prior to the *NMI Notification Date*.

The *NMI's* and *datastream suffixes* provided by the *Reserve Provider* to *AEMO* must:

*   be *NMI's* and *datastream suffixes* in the Market Settlement and Transfer Solutions (MSATS) system; and

*   have actual *interval metering data* (not *estimated metering data* or *substituted metering data*) for all *trading intervals* for at least 100 calendar days prior to [day/*weekday*] on which *reserve* was *activated* and for the period of *activation*.

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*.

8.2   **Verification**

AEMO's market systems and energy management systems will be used to verify the quantity of *reserve dispatched* in accordance with a *reserve contract*.

The *Reserve Provider* will not 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* prior to the *NMI Notification Date*.

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.

8.3   **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

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

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 100 calendar days immediately preceding the [day/*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 [days/*weekdays*] on which *reserve* was not *activated* (the **Non-Activated Days**) and [days/*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 [day/*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 [day/*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 [100] days not being Activated Days immediately preceding the [day/*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*.*

9　Charges

9.1　Billing Period

For each *billing period* during a *reserve contract,* the *Reserve Provider* will be entitled to charge *AEMO* where *reserve* has been *dispatched* during a *trading interval* in accordance with a *reserve contract* during the *billing period*, a *usage charge*, which is equal to the product of $XX 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 that *reserve contract.*

Annexure to Schedule 6 - 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	The procedures relevant to the provision of *reserve* that have been accepted by relevant *consumers* must be provided to *AEMO* (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: • *enablement, dispatch* and *disablement*; and • the notifications and responses required by a *reserve contract* for each notification of the *reserve's* availability, for each part of the *reserve* that relates to each relevant *consumer*.	
2	The *Reserve Provider* must demonstrate to *AEMO's* reasonable satisfaction that the required notifications can be provided to the operator of each part of the *reserve* in sufficient time to allow the *reserve* to be *dispatched* in accordance with the *contracted levels of performance*. *Dispatch* is not required as part of this demonstration.	
3	Where the provision of *reserve* relies on *standby generation* being available to supply the *load disconnected* from the *network*, the *Reserve Provider* must provide *AEMO* with test certificates or other evidence of satisfactory starts of each *standby generating unit,* indicating that the prime mover and energisation of the alternator of each *standby generating unit* were started recently without fail and the *standby generating unit* must *generate* electricity for at least 1 hour. The evidence to be provided to *AEMO* must indicate that each *standby generating unit* was tested within 30 days of the date of provision of the evidence to *AEMO*.	
4	The *Reserve Provider* must complete a test of the *enablement, dispatch* and *disablement* of the *reserve* under instruction from *AEMO* to *AEMO's* reasonable satisfaction*.* This test requires the *Reserve Provider* to perform the following actions in sequence (failure to perform these actions in sequence will constitute a failure to complete this test satisfactorily): • *enable* the *reserve* within the *enablement lead time*; • provide *load reduction* at a level in accordance with *dispatch instructions* issued by *AEMO*; and • *disable* under *instructions* from *AEMO* within the *disablement lead time*.	
5	The *Reserve Provider* must notify *AEMO* of all *NMI*'s and *datastream suffixes* related to the provision of *reserve*.	
	Finalisation of jurisidictional consultation under National Electricity Rules clause 3.20.3(c) and agreement of cost-sharing arrangments under National Electricity Rules clause 3.20.3(f) to the reasonable satisfaction of AEMO.	

Schedule 7 – Short-Notice Reserve – 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* and is specified in **Item 4.**

"*activation start time*" means the time by which the *reserve* specified in an *activation instructions* 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 a *reserve contract*.

"*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 Fulfimenet Date* specified in the Annexure to this Schedule by which the *Reserve Provider* must notify *AEMO* 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 *pre-activate* the *reserve equipment*.

"*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.

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2   Tenders for the Provision of Reserve

2.1   Contact Persons for Tenders

Subject to clause 17.1(b), *Requests for Tender* will be given on behalf of *AEMO* and any communications concerning a *Request for Tender* and offers in response to a *Request for Tender,* must be submitted on behalf of the *Reserve Provider* by the persons nominated in the table below:

AEMO	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	Control Room Manager
Reserve Provider	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	
Backup Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	

2.2   No obligation to make an offer

The *Reserve Provider* is not obliged to respond to a *Request for Tender* and offer the *reserve* to *AEMO* if the *Request for Tender* relates to a request for *reserve* during the following periods:

Date	Time

3   Description of Reserve

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

4   Reserve Equipment

Name of Generating Unit[14]	
Registration Status	[market/non-market]
Location	
Connection Point	
Minimum Operating Level	[ ] MW
Pre-activation Lead Time	[ ] hours
Activation Lead Time	[ ] hours
De-Activation Lead Time	[ ] hours

5   Capabilities of Reserve Equipment

5.1   Activation Constraints

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

Name of Generating Unit[14]	
Minimum run-time, i.e. the minimum period the *scheduled generating unit* must *generate.* For the avoidance of doubt, *AEMO* may issue an *instruction* to *de-activate* the *reserve* while the *reserve* is within the minimum run-time so that the *de-activation lead time* and minimum run-time are satisfied concurrently at the end of the minimum run-time.	[ ] hours
Minimum off-time, i.e. the minimum period between the last time the *scheduled generating unit* was *generating* and the time at which the *scheduled generating unit* can re-commence *generating.*	[ ] hours

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[14] Copy table and use one for each Generating Unit involved.

Other *activation constraints*	

6   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:

6.1   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 5 MW, which may be made up of smaller components that are managed by the *Reserve Provider*;

(c)   The *reserve* must 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.

6.2   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, generating* at the rate of change of the level of *generation* required by the *activation instruction*; and

(c)   upon receiving from *AEMO* an *activation instruction* to *de-activate, de-activating* the *reserve equipment* within the *de-activation lead time*.

6.3   Availability notification by the Reserve Provider

At all times during a *reserve contract*, 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 a*vailable* (MW) in the *Web Portal*. The quantity specified by the *Reserve Provider* must not exceed the [contracted quantity]

If the *Reserve Provider* becomes aware of a material change of circumstances following the entry into a *reserve contract*, the *Reserve Provider* must as soon as practicable after becoming aware of it advise *AEMO*.

7   Requests for Provision of Reserve

7.1   What AEMO may Request

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

7.2 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.

7.3 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	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	Control Room Operator on shift
Reserve Provider	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	
Backup Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	

7.4 Pre-Activation Instruction

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

(a)   increase the *reserve equipment's* output to the *minimum operating level;* 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 reach its *minimum operating level* or *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.

7.5 Activation Instruction

Subject to any *activation constraints*, *AEMO* may issue an *activation instruction* to the *Reserve Provider* at any time during a *reserve contract* 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.

7.6   Terminating *activation 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).

7.7   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.

8   Measurement and Verification

8.1   Measurement

Actual *interval 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* 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* prior to the *NMI Notification Date*.

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 relevant *activation instruction*.

8.2   Verification

AEMO's market systems and energy management systems will be used to verify the quantity of *reserve activated* in accordance with a *reserve contract*.

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.

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* prior to the *NMI Notification Date*.

9 Charges

9.1 Billing Period

For each *billing period,* the *Reserve Provider* will be entitled to charge *AEMO*

(a)   a *pre-activation charge* equal to product of $XX and the number of times a *pre-activation instruction* (not including *instructions* amending previous *instructions*) is given during the *billing period*; and

(c)   where *reserve* has been *activated* in accordance with a *reserve contract* during the *billing period*, a *usage charge,* which is equal to the product of $XX, 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 a *reserve contract*.

Annexure to Schedule 7 - 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	The *Reserve Provider* must complete a test of the *pre-activation, activation* and *de-activation* of the *reserve equipment* under *instruction* from *AEMO* to *AEMO's* reasonable satisfaction. This test requires the *reserve equipment* to perform the following actions in sequence (failure to perform these actions in sequence will constitute a failure to complete this test satisfactorily): • *pre-activate* the *reserve equipment* within the *pre-activation lead time*; • *generate* at a level above the greater of the *minimum operating level* and the *market capacity*, and in accordance with *activation instructions* issued by *AEMO*; and • *de-activate* under *instructions* from *AEMO* within the *de-activation lead time*. During the test: • All automatic *control systems*, for example, the *excitation control system* and *governor system*, must be operated in their automatic regulating mode; • The *reserve equipment* must be operated in a constant and stable manner; and • If *AGC* is installed, the *reserve equipment* must be operated under *AGC* control. Trend display printouts of the performance of the *reserve equipment* must be provided to *AEMO* as evidence of completion of this test.	
2	The *Reserve Provider* must complete a test of the notifications and procedures used to provide the *reserve* in accordance with the *contracted levels of performance*. The *Reserve Provider* must demonstrate how the *Reserve Provider* would comply with a *pre-activation instruction* and an *activation instruction*, but these actions are not required for this test.	
3	The *Reserve Provider* must notify *AEMO* of all *NMI*'s and *datastream suffixes* related to the provision of *reserve*.	
	Finalisation of jurisidictional 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.	

Schedule 8 – Short-Notice Reserve – 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 a *reserve contract*.

"*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 Fulfimenet Date* specified in the Annexure to this Schedule by which the *Reserve Provider* must notify *AEMO* 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.

2 Tenders for the Provision of Reserve

2.1 Contact Persons for Tenders

Subject to clause 17.1(b), *Requests for Tender* will be given on behalf of *AEMO* and any communications concerning a *Request for Tender* and offers in response to a *Request for Tender,* must be submitted on behalf of the *Reserve Provider* by the persons nominated in the table below:

AEMO	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	Control Room Manager
Reserve Provider	
Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	
Backup Contact Person at all times: **Name/Title:** **Telephone No:** **Email:**	

2.2 No obligation to make an offer

The *Reserve Provider* is not obliged to respond to a *Request for Tender* and offer the *reserve* to *AEMO* if the *Request for Tender* relates to a request for *reserve* during the following periods:

Date	Time

3　Description of Reserve

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)**	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								

Total *Reserve*	MW

4   Characteristics of Reserve

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

5   Not used

6   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:

6.1   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 5 MW, which may be made up of smaller components that are managed by the *Reserve Provider*;

(c)   The *reserve* must 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.

6.2   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*.

6.3   **Availability Notification by the Reserve Provider**

At all times during a *reserve contract*, 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 a*vailable* (MW) in the *Web Portal*. The quantity specified by the *Reserve Provider* must not exceed the [contracted quantity]

If the *Reserve Provider* becomes aware of a material change of circumstances following the entry into a *reserve contract*, the *Reserve Provider* must as soon as practicable after becoming aware of it advise *AEMO*.

7   Requests for Provision of Reserve

7.1   **What AEMO may Request**

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

7.2   **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.

7.3   **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	
Contact Person at all times:	
Name/Title:	Control Room Operator on shift
Telephone No:	
Email:	
Reserve Provider	
Contact Person at all times:	
Name/Title:	

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

7.4 Pre-Activation Instruction

Subject to any *activation constraints*, *AEMO* may issue a *pre-activation instruction* at any time during a *reserve contract* 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.

7.5 Activation Instruction

Subject to any *activation constraints*, *AEMO* may issue an *activation instruction* to the *Reserve Provider* at any time during a *reserve contract* 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 level specified in the relevant *Day Ahead Availability Notice* for that *reserve* and *trading interval.*

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

7.6 Terminating *activation 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).

8   Measurement and Verification

8.1   Measurement

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

(a)   Actual *interval 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 *datastream suffixes* used to provide *reserve* under a *reserve contract* 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* prior to the *NMI Notification Date*.

(d)   The *NMI's* and *datastream suffixes* provided by the *Reserve Provider* to *AEMO* must:

- be *NMI's* and *datastream suffixes* in the Market Settlement and Transfer Solutions (MSATS) system; and

- have actual *interval metering data* (not *estimated metering data* or *substituted metering data*) for all *trading intervals* for at least 100 calendar days prior to [day/*weekday*] on which *reserve* was *activated* and for the period of *activation*.

(e)   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*).

(f)   The maximum level at which *reserve* is taken to have been *activated* is the level specified in a relevant *activation instruction*.

8.2   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 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* 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.

8.3   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

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

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 100 calendar days immediately preceding the [day/*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 [day/*weekdays*] on which *reserve* was not *activated* (Non-**Activated Days**) and [day/*weekdays*] on which *reserve* was *activated* (**Activated Days**) determined as follows:

Step 1 - This set of selected days will normally comprise the 10 Non-Activated Days immediately preceding the [day/*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 [day/*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 [100] days not being Activated Days immediately preceding the [day/*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:

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

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.

9   Charges

9.1   Billing Period

For each *billing period,* the *Reserve Provider* will be entitled to charge *AEMO*:

(a)   a *pre-activation charge* equal to product of $XX and the number of times a *pre-activation instruction* (not including *instructions* amending previous *instructions*) is given during the *billing period*; and

(b)   subject to the *reserve* being available if *activated* for the [day/*weekday*] for which the *pre-activation charge* relates, where *reserve* has been *activated* during a *trading interval* in accordance with a *reserve contract* during the *billing period*, a *usage charge* equal to the product $xx and the quantity (in MWh) of the *reserve activated* as measured, verified and calculated in accordance with the relevant *reserve contract*.

Annexure to Schedule 8 - 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	The procedures relevant to the provision of *reserve* that have been accepted by relevant *consumers* must be provided to *AEMO* (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: • *pre-activation, activation* and *de-activation* of that part of the *reserve*; and • the notifications and responses required for each notification of the *reserve's* availability, for each part of the *reserve* that relates to each relevant *consumer*.	
2	The *Reserve Provider* must demonstrate to AEMO's reasonable satisfaction that the required notifications can be provided to the operator of each part of the *reserve* in sufficient time to allow the *reserve* to be *activated* in accordance with the *contracted levels of performance*. *Pre-activation* and *activation* are not required as part of this demonstration.	
3	Where the provision of *reserve* relies on *standby generation* being available to supply the *load disconnected* from the *network*, the *Reserve Provider* must provide *AEMO* with test certificates or other evidence of satisfactory starts of each *standby generating unit,* indicating that the prime mover and energisation of the alternator of each *standby generating unit* were started recently without fail and the *standby generating unit* must *generate* electricity for at least 1 hour. The evidence to be provided to *AEMO* must indicate that each *standby generating unit* was tested within 30 days of the date of provision of the evidence to *AEMO*.	
4	The *Reserve Provider* must complete a test of the *pre-activation*, *activation* and *de-activation* of the *reserve* under instruction from *AEMO* to *AEMO's* reasonable satisfaction*.* This test requires the *Reserve Provider* to perform the following actions in sequence (failure to perform these actions in sequence will constitute a failure to complete this test satisfactorily): • *pre-activate* the *reserve* within the *pre-activation lead time*; • provide *load reduction* at a level in accordance with *activation instructions* issued by *AEMO*; and • *de-activate* under *instructions* from *AEMO* within the *de-activation lead time*.	
5	The *Reserve Provider* must notify *AEMO* of all *NMI*'s and *datastream suffixes* related to the provision of *reserve*.	
	Finalisation of jurisidictional consultation under National Electricity Rules clause 3.20.3(c) and agreement of cost-sharing arrangments under National Electricity Rules clause 3.20.3(f) to the reasonable satisfaction of AEMO.	

RERT Panel Agreement

Attachment 1 to Schedule 5, 6, 7 & 8 – Confirmation

[on AEMO letterhead]

To the Reserve Provider [name/address as per relevant Schedule]

Re | Confirmation of Reserve Contract

This is a *Confirmation* under clause XX of the RERT Panel Agreement dated xxx ("Agreement").

AEMO confirms your agreement to provide the following *reserve* for the following charges:

Period of *reserve contract*:	(*AEMO* will complete)
Date(s) *reserve* is available:	(*AEMO* will complete)
Time(s) *reserve* is available (*EST*):	(*AEMO* will complete)
Quantity of available *reserve*:	(*AEMO* will complete)
Location of available *reserve*:[15]	(*AEMO* will complete)

This *Confirmation* incorporates clauses 1 and 3 to 17 of the Agreement and any Schedule X, which collectively become a *reserve contract*.

Italicised terms are defined in the Agreement.

Dated:

Signed by XX in accordance with the Agreement.

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[15] Applicable only if the reserve relates to load reduction and reserve offered is not all of the load reduction described in the relevant schedule – delete this row if this applies and this footnote.

Attachment 2 to Schedule 5, 6, 7 & 8 – Request for Tender

[on AEMO letterhead]

To the Reserve Provider [name/address as per relevant Schedule]

Re | Request for Tender

This is a *Request for Tender* under clause 4.2 of the RERT Panel Agreement dated xxx ("Agreement"). *AEMO* requests your tender for the provision of *reserve* as follows:

Date(s) *reserve* is required:	(*AEMO* will complete)
Time(s) *reserve* is required (*EST*):	(*AEMO* will complete)
Commencement and completion dates of proposed *reserve contract*:	(*AEMO* will complete)
Quantity of *reserve* required:	(*AEMO* will complete)
Location of *reserve* required:[16]	(*AEMO* will complete)

Your tender is required by XXam/pm[17] EDST on [insert date] on the form of tender attached. If you fail to submit a tender by this date and time, *AEMO* will assume that you do not wish to submit a tender.

Note that if your tender is accepted by *AEMO*, *AEMO* will send you a *Confirmation*, whereupon a *reserve contract* will be entered into that will incorporate the terms contained in the *Confirmation* and clauses 1 and 3 to 17 of the Agreement and Schedule X.

Italicised terms are defined in the Agreement.

Dated:

Signed by XX in accordance with the Agreement.

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[16]   Applicable only if the reserve relates to load reduction and reserve offered is not all of the load reduction described in the relevant schedule – delete this row if this applies and this footnote.

[17]   Delete whichever is inapplicable.

Attachment 3 to Schedule 5, 6, 7 & 8 – Form of Tender

[on Reserve Provider letterhead]

To AEMO[name/address as per relevant Schedule]:

Re | Tender for the Provision of Reserve

In response to your Request for Tender dated xxx, we offer to provide the following reserve:

Date(s) *reserve* is available:	(*Reserve Provider* to complete)
Time(s) *reserve* is available (*EST*):	(*Reserve Provider* to complete)
Quantity of available *reserve*:	(*Reserve Provider* to complete)
Location of available *reserve*:[18]	(*Reserve Provider* to complete)

We confirm that the *reserve* being offered to *AEMO* is not already contracted for the period covered by this offer and will not otherwise be made available through *central dispatch*.

We also confirm that if our tender is accepted by *AEMO*, *AEMO* will send us a *Confirmation*, whereupon a *reserve contract* will be entered into that will incorporate the terms contained in the *Confirmation* and clauses 1 and 3 to 17 of the Agreement and Schedule X.

Italicised terms are defined in the Agreement.

Dated:

Signed by XX in accordance with the Agreement.

---

[18] Applicable only if the reserve relates to load reduction and reserve offered is not all of the load reduction described in the relevant schedule – delete this row if this applies and this footnote.

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

)
)
)
)
)

....
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**

Date signed:_____

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

)
)
)
)

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

Date signed:_____