

Network Support and Control Ancillary Services Agreement

GENERIC PROFORMA DECEMBER 2017

Australian Energy Market Operator Limited

and

#1#

Note: This is the form of NSCAS Agreement published with AEMO's NSCAS Tender Guidelines version 2.0, effective 1 December 2017.

This form is published as a **general indication** of the terms and conditions a service provider would be expected to enter into with AEMO if it procures NSCAS under clause 3.11.3 of the National Electricity Rules. As set out in the NSCAS Tender Guidelines, a specific form of agreement for each NSCAS tender process will be issued with the invitation to tender. That form may differ from this document, and individual terms may be negotiated if appropriate.

This document has been set up so that technical and commercial terms specific to an individual service are specified in the Details (front page) and in one or more schedules appropriate to the type of NSCAS being provided, with no changes generally required to the rest of the agreement.

DETAILS

Parties:	Australian Energy Market Operator Limited ABN 94 072 010 327 of Level 22, 530 Collins Street, MELBOURNE VIC 3000 (AEMO) and #1# ABN #2# of #3# (NSCAS Provider)													
Commencement Date	[insert]													
Expiry Date	[insert]													
Governing law	Victoria													
Address for Service	<table border="0"> <tr> <td>AEMO:</td> <td>Attention: Group Manager Systems Capability</td> </tr> <tr> <td></td> <td>Address: GPO Box 2008 MELBOURNE VIC 3001</td> </tr> <tr> <td></td> <td>Email: Reception.Melbourne@aemo.com.au</td> </tr> <tr> <td>NSCAS Provider:</td> <td>Attention: [insert]</td> </tr> <tr> <td></td> <td>Address: [insert]</td> </tr> <tr> <td></td> <td>Email: [insert]</td> </tr> </table>		AEMO:	Attention: Group Manager Systems Capability		Address: GPO Box 2008 MELBOURNE VIC 3001		Email: Reception.Melbourne@aemo.com.au	NSCAS Provider:	Attention: [insert]		Address: [insert]		Email: [insert]
AEMO:	Attention: Group Manager Systems Capability													
	Address: GPO Box 2008 MELBOURNE VIC 3001													
	Email: Reception.Melbourne@aemo.com.au													
NSCAS Provider:	Attention: [insert]													
	Address: [insert]													
	Email: [insert]													

OPERATIVE PROVISIONS

1. Interpretation

1.1. Definitions - General

- (a) Capitalised terms used in this agreement are defined in clause 1.2, in the Details or in a Schedule.
- (b) Terms in italics have the meaning given to them in the National Electricity Rules (NER).

1.2. Dictionary

Agreement means this agreement, including the Details and all schedules and annexures.

Authority means any Commonwealth, State, Territory or local government or regulatory department, body, instrumentality, minister, agency or other authority, other than AEMO.

Auxiliary Plant means the plant associated with the operation of *generating units*, required to be started prior to starting a *generating unit*.

Availability Charge is specified in item 8 of each **Schedule**.

Available means, in respect of an NSCAS at any time, that the NSCAS is, or under this Agreement is taken to be, capable of being provided in accordance with the Contracted Levels of Performance while meeting the Minimum Technical Requirements (see clause 5).

Billing Period means a *billing period* as defined in the NER, except that:

- (a) the first Billing Period commences when this Agreement commences; and
- (b) the last Billing Period ends when this Agreement ends.

Change in Law means any change in legislation that has a material adverse effect on the rights or obligations of a party under this Agreement (including the cost of providing NSCAS) other than a change in legislation:

- (a) the operation of which is excluded under clause 18.10; or
- (b) relating to income tax (or state equivalent tax), a tax on capital gains, or taxes, imposts or charges of a similar nature.

Charges means the Availability Charge, Enabling Charge, Compensation Payment or Testing Charge as applicable.

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

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

Compensation Payments are defined in item 8 of each **Schedule**.

Conditions Precedent Fulfilment Date is specified in the **Annexure**.

Conditions Precedent are specified in the **Annexure**.

Consumer Price Index or **CPI** is the Consumer Price Index All Groups, Weighted Average of Eight Capital Cities, Index Numbers published by the Australian Bureau of Statistics.

Contract Values means the Availability Charge, Enabling Charge and Testing Charge, as adjusted annually under clause 9.10.

Contracted Levels of Performance are specified in item 4 of the relevant **Schedule** (see also clause 1.3).

Corporations Act means the Corporations Act 2001 (Cth).

Enabling Charges are specified in item 8 of each **Schedule**.

Event of Force Majeure means in respect of a party (**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 or the NER by the affected party, or of an intentional or negligent act or omission or breach of obligation of the affected party, a person providing services to the affected party or any other person over which the affected party should have exercised control; and
- (c) results in the affected party being unable to observe or perform on time and as required any obligation (other than an obligation to pay money) under this Agreement.

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) to (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.

Law means Commonwealth, state, or local legislation, judicial, administrative, or regulatory decrees, judgments, awards or orders and all common laws and equity.

LSC applies to NLAS and means the maximum *load shedding* capability and is specified in item 4 of the relevant **Schedule**.

Minimum Availability Requirement is the percentage of *trading intervals* during which the NSCAS Equipment must be Available in any rolling 12-month period and is specified in item 5 of each **Schedule**.

Minimum Technical Requirements are specified in item 6 of each **Schedule** (see also clause 1.3).

NER means the National Electricity Rules made under the National Electricity Law in the Schedule to the *National Electricity (South Australia) Act 1996* (SA).

NLAS is a network loading ancillary service, as described in the NSCAS Description.

NSCAS means the services described in item 1 of each **Schedule**.

NSCAS Description means the document published by AEMO under clause 3.11.4(a1) of the NER.

NSCAS Equipment is specified in item 3 of each **Schedule**.

Relevant Period has the meaning given in clause 5.1(a).

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.

Review Date means an anniversary of the Commencement Date.

Term means the period during which this Agreement is in effect.

Test means a test contemplated by clause 6.

Testing Charge is specified in item 8 of each **Schedule**.

Unavailable means, in respect of an NSCAS at any time, that the NSCAS is not, or under this Agreement is taken not to be, capable of being provided in accordance with the Contracted Levels of Performance while meeting the Minimum Technical Requirements (see clause 5).

1.3. Interpretation

Unless otherwise specified, a reference in this Agreement to:

- (a) a document (including this Agreement) includes the document as novated, varied, or replaced;
- (b) a clause, paragraph, schedule, or annexure is a reference to a clause, paragraph, schedule, or annexure in this Agreement;
- (c) a clause is a reference to all its subclauses;
- (d) legislation includes subordinate legislation and other instruments under them, and consolidations, amendments, re-enactments or replacements of any of them;
- (e) the singular includes the plural and vice versa and a gender includes all genders;
- (f) 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;
- (g) 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;
- (h) a person includes a reference to the person’s executors, administrators, successors, substitutes (including persons taking by novation) and assigns;
- (i) a party includes, where the context requires it, that person’s directors, officers, employees, contractors, agents and any other persons authorised by that party and, in the case of AEMO, includes any *System Operator* acting on AEMO’s behalf;
- (j) 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;
- (k) writing includes any mode of representing or reproducing words in tangible and permanently visible form, and includes facsimile transmissions;
- (l) a month is a reference to a calendar month;
- (m) a day is a reference to a period of time commencing at midnight and ending the following midnight;
- (n) 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; and
- (o) “**in accordance with the Contracted Levels of Performance while meeting the Minimum Technical Requirements**” means, in the case of NLAS, that the NLAS is provided at 80% of LSC while meeting the Minimum Technical Requirements and all of the remaining Contracted Levels of Performance.

1.4. 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.
- (d) 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.

1.5. Symbols and abbreviations

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

1. SYMBOL	2. MEANING
*	requires multiplication to be effected
+	requires addition to be effected
-	requires subtraction to be effected
/	requires division to be effected
Hz	Hertz
<	the variable to the left of the "<" is less than the variable to the right of the "<"
>	the variable to the left of the ">" is greater than the variable to the right of the ">"
≤	the variable to the left of the "≤" is less than or equal to the variable to the right of the "≤"
≥	the variable to the left of the "≥" is greater than or equal to the variable to the right of the "≥"
kV	kilovolt
MIN	followed by a range of variables in brackets, each of which is separated by a comma, refers to the smallest of those variables.
MW	Megawatt
MWh	Megawatt hour
\$	Australian dollars

1.6. 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 NSCAS the subject of that Schedule, as if the provision was an Operative Provision.

2. Conditions Precedent

2.1. Conditions

Except for those in clauses **1, 2, 7, 10, 14, 15, 17** and **18**, all of the parties' rights and obligations under this Agreement are subject to the Conditions Precedent.

2.2. Fulfilment of Conditions

The NSCAS Provider must use reasonable endeavours to fulfil or procure the fulfilment of the Conditions Precedent by the Conditions Precedent Fulfilment Date.

2.3. Updates

Until the Conditions Precedent are met, the NSCAS Provider must update AEMO at its request on the status of the fulfilment of each Condition Precedent, including the anticipated date each Condition Precedent will be fulfilled.

2.4. Waiver of Condition Precedent

Each Condition Precedent is for the sole benefit of AEMO and can only be waived by AEMO.

2.5. Conditions Precedent Fulfilment Date

If any Condition Precedent is not fulfilled by the Conditions Precedent Fulfilment Date or waived in accordance with clause **2.4**, AEMO may terminate this Agreement by giving the NSCAS Provider 3 *business days*' notice.

2.6. Effect of Termination

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

2.7. Survival

If this Agreement is terminated under clause **2.5**, clause **2.6** does not affect the rights and obligations of the parties under clauses **7, 10, 14, 15, 17** and **18**.

3. Term

- (a) This Agreement comes into effect at midnight at the beginning of the Commencement Date.
- (b) Subject to earlier termination in accordance with this Agreement, this Agreement continues until midnight at the end of the Expiry Date.

4. Provision of NSCAS

4.1. General obligations

- (a) The NSCAS Provider must provide to AEMO each NSCAS in accordance with this Agreement.
- (b) The NSCAS Provider must use reasonable endeavours to ensure that each NSCAS is Available at all times during the Term.
- (c) If at any time any *performance standards* applicable to the NSCAS Equipment are amended, the parties must negotiate in good faith to make such amendments to this Agreement as are reasonably necessary to reflect the amended *performance standards*. Any disagreement between the parties on those amendments must be resolved in accordance with clause **14**.

4.2. Requests for service

- (a) At any time during the Term, AEMO may (but is not obliged to) request any NSCAS be provided by the NSCAS Provider in accordance with the relevant Schedule.
- (b) The NSCAS Provider must use all reasonable endeavours to comply with a request under paragraph (a).
- (c) If any Schedule requires the NSCAS Equipment to operate automatically, the NSCAS Provider must use reasonable endeavours to ensure that the NSCAS Equipment operates automatically on the occurrence of an event or condition specified in that Schedule.
- (d) If, at any time, the NSCAS Provider considers that an NSCAS is, or will become, Unavailable, it must notify AEMO immediately specifying:
 - (i) which NSCAS the notice applies to;
 - (ii) when the NSCAS became, or will become, Unavailable;
 - (iii) when the NSCAS Provider expects the NSCAS to become Available again; and
 - (iv) the cause of the Unavailability.
- (e) Without limiting any right AEMO has under the NER and subject to paragraph (f), if at any time, in order to satisfy the requirement for NSCAS, AEMO requires NSCAS at a higher or lower output in order to provide a higher or lower level of service, AEMO may *constrain on* or *constrain off* one or more of the *generating units* that form part of the NSCAS Equipment.
- (f) AEMO must not *constrain on* one or more of the *generating units* that is not *generating* or has an unconstrained *dispatch target* of zero in order to provide NSCAS under this Agreement.

5. Availability

5.1. Determining Availability

- (a) The Availability of NSCAS is:
 - (i) measured over a period of 12 months, ending at the end of a month (**Relevant Period**), provided that the period between the commencement of this Agreement and the end of that month is taken to be a month;
 - (ii) equal to:
$$\frac{x}{y} \times 100\%$$
where:
 - x = the number of hours that the NSCAS is Available during the Relevant Period; and
 - y = the total number of hours in the Relevant Period (but excluding any period stated in item 5 of the relevant Schedule to be excluded for the purposes of the Relevant Period).
- (b) Without limiting paragraph (a), an NSCAS is taken to be Unavailable for any period of Unavailability notified by the NSCAS Provider under clause 4.2(d), subject to paragraph (e);
- (c) Without limiting paragraph (a), an NSCAS is taken to be Unavailable for the period determined in accordance with paragraph (d) if any of the following occurs:
 - (i) the NSCAS Provider fails to provide evidence or Test results demonstrating to AEMO's reasonable satisfaction that an NSCAS is Available within the applicable period provided for in clause 6.3 or 6.4;
 - (ii) the NSCAS Provider fails to provide the NSCAS when required to do so under this Agreement, or it is not provided in accordance with one or more of the Contracted Levels of Performance or the Minimum Technical Requirements, except where the failure is due solely to an act or omission of AEMO; or

- (iii) the results of a Test demonstrate that an NSCAS is not Available.
- (d) For the purposes of paragraph (c) the relevant NSCAS is taken to be Unavailable for the period commencing on:
 - (i) the date when the NSCAS ceased to be Available, if the NSCAS Provider can establish that date to AEMO's reasonable satisfaction; or
 - (ii) otherwise, the day that is half-way between the date of the relevant failure or Test and the date of the most recent to occur of:
 - (A) a Test that demonstrated the relevant NSCAS Equipment was Available;
 - (B) successful provision of the NSCAS in accordance with the Contracted Levels of Performance while meeting the Minimum Technical Requirements; and
 - (C) the later of the Commencement date and the Conditions Precedent Fulfilment Date this Agreement commenced,

and ending on the day on which the NSCAS Provider demonstrates to AEMO's reasonable satisfaction, by Test or otherwise, that the NSCAS is Available.
- (e) During any period when an NSCAS is Unavailable solely as a result of an Event of Force Majeure or an act or omission of AEMO:
 - (i) the NSCAS is taken to be Available for the purposes of determining the payment due to the NSCAS Provider in respect of Availability Charges; and
 - (ii) that Unavailability is to be disregarded in determining whether the NSCAS meets the Minimum Availability Requirement.

5.2. Requirement for remedial action

If the NSCAS is Unavailable for any reason, the NSCAS Provider must:

- (a) diligently and at its own expense take the necessary remedial action to ensure that the relevant NSCAS Equipment can meet the Minimum Technical Requirements and provide the relevant NSCAS in accordance with the Contracted Levels of Performance;
- (b) promptly advise AEMO of the proposed timetable for implementing the remedial action and keep AEMO informed of progress;
- (c) after taking the remedial action, conduct a Test or submit such evidence as AEMO may require to demonstrate to AEMO's reasonable satisfaction that the NSCAS is Available; and
- (d) pay AEMO's reasonable costs incurred in relation to any Test required by AEMO for the purposes of paragraph (c), or in reviewing any other evidence concerning the remedial action.

6. Tests

6.1. Types and Frequency of Tests

- (a) The NSCAS Provider must conduct the Tests required by the relevant Schedule:
 - (i) at the times specified in the relevant Schedule, unless the requirement for the Test is waived by AEMO or the timing is varied at AEMO's request or with its agreement; and
 - (ii) within a reasonable period of being requested to do so by AEMO under paragraph (b) or (c), in accordance with this clause 6.
- (b) AEMO may request the NSCAS Provider to conduct a Test at any time if AEMO reasonably believes that an NSCAS is Unavailable, and the NSCAS Provider must conduct that Test within a reasonable time after receiving the request.

- (c) If the NSCAS Provider modifies any NSCAS Equipment in a manner that could reasonably be expected to affect its ability to provide NSCAS in accordance with the Contracted Levels of Performance while meeting the Minimum Technical Requirements, AEMO may request that the NSCAS Provider conduct Tests to demonstrate that the NSCAS Equipment is Available.
- (d) Provided each NSCAS remains Available, the NSCAS Provider may conduct any other tests on the NSCAS Equipment at any time during the Term.

6.2. Conduct of Tests

- (a) Prior to conducting any Test, the NSCAS Provider must:
 - (i) notify AEMO of its intention to conduct the Test at least 20 business days prior to the proposed date of the Test, unless a shorter notice period is agreed with AEMO;
 - (ii) agree with AEMO on the timing and duration of the Test (which agreement must not be unreasonably withheld); and
 - (iii) invite AEMO to appoint a Representative to witness the conduct of the Test in order to verify that the Test is carried out correctly.
- (b) If AEMO appoints a Representative under paragraph (a)(iii) to witness a Test:
 - (i) the NSCAS Provider must provide sufficient access to permit that Representative to witness the Test in order to verify that it is carried out correctly; and
 - (ii) AEMO must ensure that the Representative:
 - (A) does not interfere with the conduct of the Test;
 - (B) does not cause any loss or damage to the NSCAS Provider's assets;
 - (C) does not interfere with the operation of the NSCAS Provider's business;
 - (D) observes the NSCAS Provider's requirements relating to occupational health and safety and industrial relations matters that apply to all invitees; and
 - (E) does not ask any question, or give any direction, instruction, or advice, to any representative of the NSCAS Provider other than the Representative designated by the NSCAS Provider for this purpose.

6.3. Evidence of Tests

- (a) Unless otherwise agreed between the parties, if the NSCAS Provider conducts a Test, the NSCAS Provider must provide to AEMO evidence that the Test has been conducted, together with the results of that Test, within 15 *business days* of the Test being conducted.
- (b) The evidence provided to AEMO under paragraph (a) must demonstrate whether the NSCAS is Available.

6.4. Failure to Conduct Tests

If the NSCAS Provider does not conduct a Test as required by clause 6.1, AEMO may, by notice to the NSCAS Provider, request an explanation of why the Test was not carried out and the NSCAS Provider must respond within 2 *business days*, setting out:

- (a) the reasons why the Test was not conducted;
- (b) when the Test will be conducted; and
- (c) information demonstrating that the NSCAS remains Available.

6.5. Failure to Agree

If the parties cannot agree on the procedures to be followed in conducting a Test, or the timing or duration of a Test as required by clause 6.2(a)(ii), the disagreement must be resolved in accordance with clause 14.

6.6. Cost of Testing

- (a) Subject to paragraph (b), the NSCAS Provider must pay all costs relating to Tests conducted under clause 6.1.
- (b) If a Test conducted by the NSCAS Provider under clause 6.1(a) demonstrates that the NSCAS is Available, AEMO must pay the NSCAS Provider the Testing Charge.

7. Records, Audits and Inspections

7.1. Type of Records

The NSCAS Provider must compile and maintain reasonable records concerning this Agreement, including the delivery of NSCAS under this Agreement, the operation, maintenance and testing of NSCAS Equipment, any procedures used in the performance of this Agreement and all Communications given or received by telephone in relation to this Agreement.

7.2. Form and Retention

- (a) The records referred to in clause 7.1 may be maintained in writing or electronically.
- (b) The NSCAS 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 NSCAS at any time during the period referred to in clause 7.1(b).
- (b) The NSCAS 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 NSCAS 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 NSCAS 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 NSCAS Provider agrees otherwise, an audit may only occur during normal business hours on a business day.

7.5. Conduct of Audit

Audits will occur at the site at which the relevant records are maintained by the NSCAS Provider and the NSCAS Provider must provide AEMO's Representatives conducting the audit with all reasonable assistance they 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 NSCAS Equipment to determine whether the NSCAS Provider is complying with this Agreement.
- (b) At least 5 business days prior to the date on which AEMO wishes to make an inspection, AEMO must deliver a notice to the NSCAS Provider detailing the following information:
 - (i) the NSCAS Equipment to be inspected and the scope of the inspection;
 - (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.
- (c) The NSCAS 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.
- (d) If AEMO conducts an inspection under paragraph (a), the NSCAS 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 NSCAS Equipment under clause 7.6 within 6 months of a previous inspection under this Agreement of the same NSCAS Equipment.
- (b) Unless otherwise agreed by the NSCAS 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 ensure that its Representatives:
 - (i) do not cause any loss or damage to the NSCAS Provider's assets;
 - (ii) do not interfere with the operation of the NSCAS Provider's business (provided that the inspection itself does not constitute interference);
 - (iii) observe the NSCAS Provider's requirements relating to occupational health and safety and industrial relations matters that apply to all invitees of the NSCAS Provider; and
 - (iv) do not ask any question or give any direction, instruction, or advice to any of the NSCAS Provider's personnel other than the Representative designated by the NSCAS Provider for this purpose.

8. Maintenance

- (a) The NSCAS Provider must maintain the NSCAS Equipment in accordance with *good electricity industry practice*.
- (b) The NSCAS Provider must notify AEMO promptly after changing or modifying any NSCAS Equipment in a way that reduces or could reasonably be expected to reduce the Availability of an NSCAS.

9. Payments

9.1. Calculation of Payments

- (a) Subject to paragraph (b), the charges owed by AEMO for NSCAS provided under this Agreement are to be determined in accordance with item 7 of each Schedule, as adjusted under clause 9.10.

- (b) If the same NSCAS Equipment is being used to provide more than one type of NSCAS at the same time, the NSCAS Provider is not entitled to receive a charge for each of them, but AEMO must instead pay the amount that represents the highest of the applicable charges for the NSCAS being provided.

9.2. Preliminary Statements

Within 5 *business days* after the end of each Billing Period, AEMO must give the NSCAS Provider a preliminary statement setting out the charges and any other amounts owed by each party to the other party under this Agreement in respect of that Billing Period (**preliminary statement**).

9.3. Final Statements

Not later than 18 *business days* after the end of each Billing Period, AEMO must give the NSCAS Provider a final statement stating the net amount payable by one party to the other under this Agreement in respect of that Billing Period (**final statement**).

9.4. Disputes over Statements

- (a) If there is a dispute between the parties concerning the charges or any other amounts payable by one party to the other specified in a preliminary statement, the parties agree to use reasonable endeavours to resolve the dispute within 15 *business days* of the end of the relevant Billing Period. The dispute must be resolved by agreement or in accordance with clause 14.
- (b) If the parties have not resolved the dispute before the time at which AEMO must give the NSCAS Provider the final statement, AEMO must prepare that final statement on the basis of its own assessment of the charges and any other amounts payable under this Agreement in respect of that Billing Period.
- (c) Disputes in relation to a final statement must be raised within 6 months of the date of the relevant final statement. 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.

9.5. 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.

9.6. Adjustment

- (a) Where the charges or any other amounts specified in a final statement:
 - (i) must be adjusted to effect an adjustment retrospectively to a Review Date under clause 9.11;
 - (ii) are agreed by the parties to be incorrect; or
 - (iii) are determined in accordance with clause 14 to be incorrect or not payable,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:

- (i) on the same day as the next payment is made under clause 9.5, where applicable by set off against an amount due to the party advantaged; or
- (ii) if no subsequent payments are to occur under clause 9.5, within 15 business days after the replacement statement is given under paragraph (a).

9.7. No payment for Negative Calculation

Except in the case of an adjustment under clause 9.6, if the calculation of a charge results in a negative amount, the amount payable is taken to be zero.

9.8. Measurement

- (a) Measurement of each NSCAS must be made in accordance with each relevant Schedule and as provided by AEMO's records and the NSCAS Provider's metering, measurement, supervisory and electronic data processing systems.
- (b) Paragraph (a) does not prevent the NSCAS Provider from disputing the accuracy of AEMO's records.

9.9. Reduced Payment if NSCAS Unavailable

- (a) Availability Charges and Enablement Charges are only payable to the NSCAS Provider in respect of *trading intervals* occurring in a period during which the relevant NSCAS is Available or taken to be Available under this Agreement.
- (b) The NSCAS Provider must repay to AEMO any Availability Charges or Enablement Charges previously paid for an NSCAS in respect of a *trading interval* when that NSCAS was, or was taken to be, Unavailable under this Agreement.
- (c) AEMO may elect to set off any repayment amount against an amount due to the NSCAS Provider by AEMO. If AEMO does not so elect, the NSCAS Provider must pay that amount on the same day as the next payment is made under clause 9.5 or within 15 *business days* after the date that AEMO provides a statement for the relevant amount if no subsequent payments are to occur under clause 9.5.

9.10. GST

- (a) The Contract Values and any other prices, fees and charges and any other amounts payable to or by AEMO under this Agreement exclude GST.
- (b) Where a party is required under this Agreement to reimburse or otherwise pay an amount to another party (**reimbursed party**) on account of a cost or expense incurred by that reimbursed party, the amount of the reimbursement will be reduced by the amount of any input tax credit to which the reimbursed party is entitled for an acquisition to which that cost or expense relates.
- (c) If either party makes a taxable supply under this Agreement, the party receiving the taxable supply must also pay an additional amount equal to the consideration payable for the supply multiplied by the applicable GST rate.
- (d) Each party must include the additional amounts contemplated under paragraph (c) in statements issued under this Agreement and 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 9.6.
- (f) In clause 9.9, "**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).

9.11. Review based on CPI variations

- (a) Each Contract Value will be reviewed annually as of each Review Date and adjusted effective from that date in accordance with the change in CPI, so that the Contract Value as at the Review Date is equal to:

CVB * CPI/CPIB

Where:

CVB means the Contract Value immediately before the Review Date;

CPI means the CPI for the quarter ending on the 30 June immediately before the Review Date;
and

CPIB means the CPI for the quarter ending on the 30 June in the preceding year.

- (b) If either:
 - (i) the CPI ceases to be published; or
 - (ii) the method of calculation of the CPI substantially alters,the CPI is to be replaced by the nearest equivalent index and any necessary consequential amendments are to be made.
- (c) Any replacement index and consequential amendments required under paragraph (b) are to be determined by agreement between the parties or, if the parties do not agree, by the Australian Statistician or their nominee (acting as an expert and not as an arbitrator), whose decision is binding and conclusive.

10. Extent of Liability

10.1. AEMO Liability Cap

- (a) Subject to paragraph (b) and other than in respect of any unpaid Charges, the total amount recoverable from AEMO in respect of any and all Claims arising out of any one or more events during the Term with respect to, arising from, or in connection with, this Agreement or the provision of NSCAS is limited to a maximum aggregate amount of \$5,000,000.
- (b) Regardless of the nature of any Claim, AEMO is not liable in any circumstances for any:
 - (i) damages or losses that are not direct and do not flow naturally from a breach of this Agreement, even if they may reasonably be supposed to have been in the contemplation of both parties as a probable result of the breach at the time they entered into this Agreement;
 - (ii) loss of market, opportunity or profit (whether direct or indirect); or
 - (iii) damages or losses to the extent that a Claim results from the NSCAS Provider's failure to act in accordance with this Agreement, a Law or *good electricity industry practice*.

10.2. NSCAS Provider Liability Cap

- (a) Subject to paragraph (b), and other than in respect of any amounts repayable by the NSCAS Provider in respect of Charges, the total amount recoverable from the NSCAS Provider in respect of any and all Claims arising out of any one or more events during the Term with respect to, arising from, or in connection with, this Agreement or the provision of the NSCAS is limited to a maximum aggregate amount of \$5,000,000.
- (b) Regardless of the nature of any Claim, the NSCAS Provider is not liable in any circumstances for any:
 - (i) damages or losses that are not direct and do not flow naturally from a breach of this Agreement, even if they may reasonably be supposed to have been in the contemplation of both parties as a probable result of the breach at the time they entered into this Agreement;
 - (ii) loss of market, opportunity or profit (whether direct or indirect); or
 - (iii) damages or losses to the extent that a Claim results from AEMO's failure to act in accordance with this Agreement, a Law or *good electricity industry practice*.

10.3. Indemnity

Subject to clause 10.2, the NSCAS 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, or in connection with, any act or omission of the NSCAS Provider in relation to the provision of NSCAS.

10.4. National Electricity Law

This Agreement does not vary or exclude the operation of sections 116, 119 or 120 of the National Electricity Law. To avoid doubt, any liability of a party under this Agreement will not exceed the lesser of any amount to which that liability may be limited under the National Electricity Law, and the relevant liability cap under clause 10.1 or 10.2.

11. Force Majeure

11.1. Effect on performance of obligation

A party's obligation under this Agreement (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 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 paragraph (a);
 - (iii) the cessation of the Event of Force Majeure or the successful mitigation of the effects of the Event of Force Majeure; and
 - (iv) any other matter the other party reasonably requests in connection with the occurrence of the Event of Force Majeure and the matters referred to in paragraph (b).

11.3. Obligation to mitigate

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

11.4. Termination for extended force majeure outage

- (a) If, by reason of an Event of Force Majeure, NSCAS Equipment is incapable of providing NSCAS for a period exceeding 3 months, AEMO may terminate this Agreement in respect of the relevant NSCAS.
- (b) If AEMO gives a termination notice under paragraph (a) in respect of a particular NSCAS, this Agreement terminates in respect of that NSCAS from the start of the later of:
 - (i) the day following the day on which the notice was given; and
 - (ii) the day nominated in the notice,and on termination the applicable Schedule will no longer form part of this Agreement or any other agreement between the parties.

12. Default

12.1. Termination

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

- (a) the defaulting party does not pay any money due under this Agreement on the due date and the defaulting party does not pay the money within a further period of 45 business days after the terminating party serves notice on the defaulting party requiring payment;
- (b) subject to clause **12.2**, the defaulting party does not carry out or meet any other material obligation under this Agreement and in the case of a default that is capable of remedy, does not remedy that default within 60 business days after the terminating party serves notice on the defaulting party requiring it to be remedied;
- (c) any representation or warranty given by the defaulting party under clause **15** 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 immediately terminate this Agreement by giving notice to the NSCAS Provider if:
 - (i) the NSCAS Provider fails twice within a 6-month period to demonstrate that the NSCAS is Available when requested to provide the NSCAS or otherwise required to demonstrate its Availability under this Agreement; or
 - (ii) at the end of any Relevant Period, the Availability of an NSCAS calculated in accordance with clause 5.1 falls below the Minimum Availability Requirement for that NSCAS.
- (b) A termination notice given under paragraph (a)(ii) must set out in detail how compliance with the Minimum Availability Requirement was measured.
- (c) At any time, AEMO may terminate this Agreement for convenience on giving the NSCAS Provider at least 2 months' notice.

12.3. Termination Notices

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

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

12.4. Survival

Expiry or termination of this Agreement for any reason does not affect:

- (a) any rights of either party against the other that:
 - (i) arose prior to the time at which expiry or termination occurred; and
 - (ii) otherwise relate to or might arise at any future date from any breach of this Agreement occurring prior to the expiry or termination; or
- (b) the rights and obligations of the parties under clauses **7, 9, 10, 14** and **18**.

12.5. Reduction of NSCAS

If AEMO is entitled to terminate this Agreement under clause **12.1** or **12.2**, AEMO may instead elect to reduce the number of NSCAS it purchases under this Agreement by specifying so in a notice to the Service Provider that complies in all other respects with clause **12.1** or **12.2** (as applicable). On and from the effective date of that notice, the specified Schedule will be taken not to form part of this Agreement or any other agreement between the parties.

12.6. No other termination

Subject to any written Law to the contrary, a party must not terminate this Agreement other than for a reason provided for under this Agreement and in accordance with the relevant requirements for termination.

13. Assignment and Sub Contracting

13.1. Assignment

- (a) Subject to paragraph (c), the NSCAS Provider must not dispose of its rights in this Agreement or NSCAS 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 NSCAS Provider disposes of the NSCAS Equipment to one person or a group of persons (assignee);
 - (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 NSCAS Provider's obligations under this Agreement; and
 - (iii) the assignee is a Registered Participant.
- (c) The NSCAS Provider may grant security interests by way or mortgage or charge over this Agreement and the NSCAS Provider's rights and interests in or under this Agreement without AEMO's consent.
- (d) In this clause, '**dispose of**' or '**disposal**' refers to an assignment, transfer or other means of disposing of all or part of a legal or equitable interest, whether by sale, lease, declaration or creation of trust or otherwise.

13.2. Sub-contracting

- (a) The NSCAS Provider must not sub-contract the performance of any of its obligations under this Agreement without first obtaining AEMO's consent, which must not be unreasonably withheld or delayed.
- (b) If the NSCAS Provider sub-contracts the performance of obligations under this Agreement, the NSCAS Provider remains responsible for the performance of this Agreement.

14. Dispute Resolution

- (a) If a dispute arises in relation to this Agreement or its subject matter, the parties agree that rule 8.2 of the NER applies to that dispute.

- (b) Unless otherwise agreed by the parties, or determined under the rule 8.2 dispute resolution processes, the parties must continue to perform their obligations under this Agreement despite the operation of this clause 14.

15. Warranties

- (a) The NSCAS 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) it will render NSCAS with due care and skill;
 - (ii) it and its representatives are duly qualified and skilled to provide NSCAS;
 - (iii) it will provide NSCAS in accordance with all relevant Law, *good electricity industry practice* and relevant Australian Standards and codes of practice;
 - (iv) it will ensure that data of NSCAS Availability and provision 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 Availability and provision of NSCAS under this Agreement;
 - (v) the NSCAS Provider's obligations under this Agreement are enforceable in accordance with their terms; and
 - (vi) the NSCAS Provider is entitled to carry out its obligations under this Agreement.
- (b) AEMO represents and warrants to the NSCAS Provider as at the date of this Agreement and at all times after the date of this Agreement that AEMO's obligations under this Agreement are enforceable in accordance with their terms.

16. Compliance with Law and the Requirements of an Authority

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

17. Change in Law

17.1. Change in Law Notice

- (a) If a Change in Law occurs during the Term, a party may give notice (**notifying party**) to the other party (**notified party**) of the Change in Law.
- (b) Any notice given by a notifying party under paragraph (a) must:
 - (i) be given by within 3 months of the commencement of the relevant Change in Law, otherwise this clause 17 will not apply; and
 - (ii) include full details of impact of the Change in Law and any supporting information reasonably necessary to enable the notified party to verify its impact.

17.2. Negotiations

On receipt of a notice under clause 17.1, the parties must negotiate in good faith such amendments to this Agreement as are necessary or appropriate on the basis of the following principles:

- (a) the amendments will endeavour to preserve the economic and legal effect of the Agreement as at the Commencement Date to the extent practicable, except any change in the Contract Values will be limited to the actual change in the cost of providing NSCAS arising from the Change in Law; and
- (b) the amendments will otherwise be fair and reasonable in the circumstances.

17.3. Dispute

If the parties are unable to agree on the amendments in accordance with clause 17.2 within 2 months of receipt of the notice received under clause 17.1, the dispute must be resolved in accordance with clause 14. Any third party appointed under clause 14 to assist in the resolution of the dispute must take into account the principles detailed in clause 17.2.

18. General

18.1. Notices

- (a) Subject to paragraph (b), 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 pre-paid express post (registered airmail if posted to or from a place outside Australia), or sent by electronic message, to the postal or electronic mail address of the addressee specified for that party in the Details.
- (b) Subject to the NER, 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; or
 - (ii) request for NSCAS made by AEMO,may be made by automated electronic process, telephone or other instantaneous means of communication.
- (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 hand-delivery, immediately upon being delivered to the address of the recipient party;
 - (ii) in the case of a posted letter, on the 2nd (10th, if posted to or from a place outside Australia) business day after posting;
 - (iii) 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
 - (iv) in the case of Communications under paragraph (b), instantaneously.
- (f) Except for 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 5:00pm 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 18.1 and the Details.

18.2. Exercise of Rights

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

18.3. 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.

18.4. Amendment

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

18.5. Approvals and Consents

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

18.6. Continuing Indemnities

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

18.7. 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.

18.8. 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.

18.9. Further Assurances

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

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

18.10. Supervening Law

Subject to clause 17, any present or future Law that operates to vary an obligation or right, power or remedy of a person in connection with this Agreement is excluded to the extent permitted by Law.

18.11. Severability

If a provision of this Agreement is void, unenforceable, or illegal in a jurisdiction, it is severed for that jurisdiction. The remainder of this Agreement remains effective and the validity or enforceability of that provision in any other jurisdiction is not affected. This clause 18.11 has no effect if the severance alters the basic nature of this Agreement or is contrary to public policy.

18.12. Entire Agreement

This Agreement is required by the NER and operates in accordance with the NER. Subject to this requirement, it constitutes the entire agreement of the parties in connection with the provision of the NSCAS and any previous agreements, understandings and negotiations on that subject matter cease to have any effect.

18.13. Confidential Information

Any information of a commercially sensitive nature exchanged between the parties under this Agreement or during the negotiations preceding this Agreement is confidential information. The NSCAS Provider consents to the disclosure of that information by AEMO to the extent reasonably necessary for the purposes of assessing the viability of NSCAS, preparing restart plans, training in power system emergency response and in the delivery of NSCAS, or any other obligation of AEMO under the NER.

18.14. No other Representations or Warranties

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

18.15. Counterparts

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

18.16. Governing Law & Jurisdiction

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

18.17. No Partnership, Agency or Trust

Except as expressly provided in this Agreement, nothing contained or implied in this Agreement:

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

EXECUTED as an agreement

Drafting Note: For each contracted NSCAS, there will be a schedule containing the following matters:

- *Definitions for terms not used elsewhere in the agreement*
- *A description of the NSCAS and the NSCAS Equipment that provides it*
- *Levels of performance, and Minimum Availability Requirement (rolling 12 month periods)*
- *Minimum Technical Requirements*
- *How AEMO will request the provision of SRAS*
- *Tests to be performed to demonstrate capability*
- *Itemisation of charges*

The following are sample schedules. These are not the only types of NSCAS that AEMO may acquire, and additional provisions may need to be developed to meet the requirements of each procurement.

DRAFT

Schedule 1 - Network Loading Ancillary Service (NLAS)

Definitions

In this Schedule:

Enable or **Enabled** means the NSCAS Equipment is ready to be disconnected or to have the consumption of electricity reduced and the NSCAS Provider has issued a Communication to AEMO to this effect under paragraph (c) of item [#] of this Schedule.

Load is **shed** when there is a reduction in the level at which the NSCAS Equipment is consuming electricity (as measured at the relevant connection point) automatically or manually in response to excessive network loading.

Response time is specified in item 3 of this Schedule.

Transmission Power Line means a *transmission line* or group of *transmission lines* that:

- (a) connects the transmission networks in adjacent regions; or
- (b) impacts on the active power flow across adjacent regions.

S1.1 Item 1: Description of NSCAS

The NSCAS to be provided by the NSCAS Provider is NLAS, to be provided at the *connection point* for the Transmission Power Line specified in the table below

Connection Point	
Transmission Power Line	
Transmission Power Line Location	

S1.2 Item 2: NSCAS Equipment

Location	NSCAS Equipment

S1.3 Item 3: Contracted Levels of Performance

Performance Requirement	Contracted Level of Performance
LSC	MW
Maximum time for interruption of <i>load</i>	minutes
Maximum time to enable the NSCAS Equipment	minutes
Response time	seconds

S1.4 Item 4: Minimum Availability Requirement

Minimum Availability Requirement for each Relevant Period	[]%
Exclusions (for determination of 'y' in clause 5.1(a))	Periods when <i>[insert any relevant constraints impacting ability to provide NLAS]</i>

S1.5 Item 5: Minimum Technical Requirements

Automatically interruptible load¹

- (a) The NSCAS Equipment:
- (i) must control the active power flow into or out of a *transmission network* by *[insert the method(s) of controlling active power flow]*;
 - (ii) has *[insert the method of measuring amount of load shed]* for determining the amount of *load* that was actually shed;
 - (iii) must be capable of automatically *disconnecting* or reducing its consumption of electricity within five seconds of receipt of a Communication from AEMO;
 - (iv) must include measuring devices to record the change in consumption of electricity (in MW) of the NSCAS Equipment following an automatic *disconnection* or reduction; and
 - (v) must be capable of transmitting measurements of *active power* and *reactive power* output to AEMO every 4 seconds.
- (b) The consumption of electricity by the NSCAS Equipment must be capable of being *disconnected* or reduced for a period of at least 15 minutes.

Manually interruptible load²

- (a) The NSCAS Equipment:
- (i) must be capable of being manually disconnected or reduced within 15 seconds of receipt of a Communication from AEMO;
 - (ii) must include control devices to allow the consumption of electricity by the NSCAS Equipment to be *disconnected* or reduced by operation of a push button or equivalent device by AEMO; and
 - (iii) must include measuring devices to record the change in consumption of electricity (in MW) of the NSCAS Equipment following the *disconnection* or reduction.
- (b) The consumption of electricity by the NSCAS Equipment must be capable of being *disconnected* or reduced for a period of at least 15 minutes.

S1.6 Item 6: Requests for Service

- (a) AEMO will issue a Communication to the NSCAS Provider to get ready to disconnect or reduce the consumption of electricity of the NSCAS Equipment.
- (b) On receipt of the Communication sent in accordance with paragraph (a), the NSCAS Provider must configure the NSCAS Equipment to get ready to allow its consumption of electricity to be disconnected or reduced in accordance with the Communication.
- (c) The NSCAS Provider must issue a Communication to AEMO when the NSCAS Equipment is ready to allow its consumption of electricity to be disconnected or reduced.

¹ Delete if NLAS is only for manually interruptible load

² Delete if NLAS is only for automatically interruptible load

- (d) AEMO will issue a further Communication to the NSCAS Provider requesting that the NSCAS Provider disconnect or reduce the consumption of electricity of the NSCAS Equipment.
- (e) On receipt of the Communication sent in accordance with paragraph (d) the NSCAS Provider must disconnect or reduce the consumption of electricity of the NSCAS Equipment in accordance with the Communication.
- (f) AEMO will issue a further Communication to the NSCAS Provider advising that the NSCAS Provider can reconnect or increase the consumption of electricity of the NSCAS Equipment.
- (g) On receipt of the Communication sent in accordance with paragraph (f) the NSCAS Provider may reconnect or increase the consumption of electricity of the NSCAS Equipment.
- (h) If the NSCAS has been Enabled, it will not be taken to be disabled until a Communication is issued by AEMO in accordance with paragraph (f).

S1.7 Item 7: Tests

Parameters of testing	Method of testing	Timing of first and subsequent tests
Response Time	Simulated inputs with trip signals disabled	[Annually on anniversary of test prior to contract or for CP fulfilment –to be specified]
Tripping of a <i>load</i> block	Control signal sent to a relay to trip at least 80% of LSC	[Annually on anniversary of test prior to contract or for CP fulfilment –to be specified]
Time period for interruption of <i>load</i>	Load is interrupted for 15 minutes	[Annually on anniversary of test prior to contract or for CP fulfilment –to be specified]
Time period for NSCAS Equipment to be enabled	On receipt of the relevant Communication, Enable the NSCAS Equipment to get ready to <i>disconnect</i> or <i>reduce load</i> . Record the time taken to Enable the NSCAS Equipment from the time Communication was received.	[Annually on anniversary of test prior to contract or for CP fulfilment –to be specified]

S1.8 Item 8: Prices and Payments

(a) Availability Charge

An Availability Charge is payable by AEMO for each *trading interval* during which the NSCAS is Available and is determined by applying the formula set out below:

$$LSA * MWR * CF$$

where:

$$LSA = \text{[insert amount]} \text{ in } \$/\text{MW}$$

$$MWR = \text{the lowest of (in MW):}$$

- (i) the *load* available to be shed as measured by AEMO at the beginning of the first *dispatch interval* within the respective *trading interval* where that measured available load is $\geq 80\%$ of LSC; or
- (ii) the *load* available to be shed as last notified by the NSCAS Provider; or
- (iii) LSC

CF means a compliance flag. CF is:

- (i) 0 if $MWR < 80\% * LSC$; or

- (ii) 1 if $MWR \geq 80\% * LSC$.

(b) Enabling Charge

An Enabling Charge is owed by AEMO for each trading interval during which the NSCAS is Enabled at AEMO's request and is determined by applying the following formula:

$$LSE * LSC$$

where:

$$LSE = \text{[insert amount] in \$/MW}$$

(c) Compensation Payment

If:

- (i) NSCAS is Enabled at AEMO's request during a *billing period*;
- (ii) the criteria for shedding *load* specified by AEMO have been met in that *billing period*; and
- (iii) as a result *load* is shed,

a Compensation Payment is owed by AEMO for the period *load* is shed, determined by applying the following formula:

$$\text{MAX} \left(\text{MCP}, \sum_{ti=1}^{ti=n} \left(\frac{ALS}{12} * MP_{ti} * NDI_{ti} \right) \right)$$

where:

$$\text{MCP} = \$[\text{insert amount}]$$

ALS = means the amount of *load* shed by the NSCAS Equipment that is taken to be the difference between the *load* measurement taken in the last *dispatch interval* before the *load* was shed and the *load* measurement taken in the first *dispatch interval* after the *load* was shed, in MW

MP_{ti} = the *spot price* that would have, or has, been paid under the NER for electricity consumed by the NSCAS Equipment during the *trading interval* "ti", being equal to TLF * RRP (both as defined in clause 3.15.6 of the NER) as calculated in respect of the *connection point* in respect of the NSCAS Equipment for the *trading interval*, in \$/MWh

NDI_{ti} = the number of *dispatch intervals* in *trading interval* "ti" during which the criteria specified in paragraphs (i) to (iii) have been met.

$\sum_{ti=1}^{ti=n}$ = summation over all *trading intervals* "ti" during the period in which *load* is shed.

(d) Testing Charge

A Testing Charge of \$[] is payable by AEMO for each set of Tests described in item 7.

[Note: The charge should be expressed as a single charge for all required annual tests, or can be changed to an individual amount for each test parameter].

Schedule 2 - Voltage Control Ancillary Services (VCAS) – Generation Mode

Definitions

In this Schedule:

Reactive Power Absorption Capability means the *reactive power* absorption capability (lagging power factor) at *rated active power* in excess of the *performance standard* applicable to the NCSAS Equipment, as specified in item 3 of this Schedule.

Reactive Power Generation Capability means the *reactive power generation* capability (leading power factor) at *rated active power* in excess of the *performance standard* applicable to the NCSAS Equipment, as specified in item 3 of this Schedule.

S2.1 Item 1: Description of NSCAS

The NSCAS to be provided by the NSCAS Provider is VCAS, being the amount of *reactive power generated* by the NSCAS Equipment in excess of the *performance standard* for *reactive power* for the NSCAS Equipment supplied up to the *connection point* to the *transmission network* at [insert location of connection point].

S2.2 Item 2: NSCAS Equipment

Location	NSCAS Equipment

S2.3 Item 3: Contracted Levels of Performance

Performance Requirement	Contracted Level of Performance
Rated <i>active power</i>	MW
Reactive Power Generation Capability	MVAr
Reactive Power Absorption Capability	MVAr
Maximum time that the Reactive Power Generation Capability or Reactive Power Absorption Capability can be sustained	minutes

S2.4 Item 4: Minimum Availability Requirement

Minimum Availability Requirement for each Relevant Period	[]%
Exclusions (for determination of 'y' in clause 5.1(a))	Periods when the NSCAS Equipment is not <i>dispatched</i>

S2.5 Item 5: Minimum Technical Requirements

The NSCAS Equipment must:

- (a) be capable of being *dispatched*;
- (b) be capable of transmitting measurements of *active power* and *reactive power* output to AEMO every 4 seconds;
- (c) be capable of absorbing or *generating*, leading power factor or lagging power factor in excess of the *performance standard* applicable to the NSCAS Equipment;
- (d) be capable of sustaining the Contracted Levels of Performance of *reactive power generation* or *reactive power absorption* for at least 15 minutes; and
- (e) meet its *performance standards*.

S2.6 Item 6: Automatic operation requirement

If a *credible contingency occurs*, the NSCAS Equipment must automatically absorb or generate *reactive power*.
[insert specific details as necessary]

S2.7 Item 7: Tests

Parameters to be tested	Method of testing	Timing of initial and subsequent tests
The Reactive Power Absorption Capability of the NCAS Equipment	A Test that varies the <i>reactive power</i> output of the NCAS Equipment within the limits specified by the NCAS Provider (Absorption Capability Test)	[Annually on anniversary of test prior to contract or for CP fulfilment –to be specified]
The Reactive Power Generation Capability of the NCAS Equipment	A Test that varies the <i>reactive power</i> output of the NCAS Equipment within the limits specified by the NCAS Provider (Generation Capability Test)	[Annually on anniversary of test prior to contract or for CP fulfilment –to be specified]
Accuracy of remote indicators	By comparison with a calibrated instrument or alternatively by comparison between the measurements made by the NCAS Provider and AEMO.	[Annually on anniversary of test prior to contract or for CP fulfilment –to be specified]
Sustained <i>reactive power generation</i> or absorption or both (as required)	Sustain <i>reactive power generation</i> or absorption for 15 minutes	[Annually on anniversary of test prior to contract or for CP fulfilment –to be specified]

NOTES:

- Unless otherwise agreed with AEMO, the NSCAS Provider must carry out the Absorption Capability Tests and the Generation Capability Test at *rated active power*.
- If the NSCAS Provider carries out an Absorption Capability Test or a Generation Capability Test other than at *rated active power*, AEMO may extrapolate the Test results to *rated active power* using the capability curve set out in the **Attachment** to this **Schedule**.

S2.8 Item 8: Prices and Payments

(a) Availability Charge – Reactive power generation

An Availability Charge is payable by AEMO for each *trading interval* during which the NSCAS is Available and is determined by applying the formula set out below:

$$\text{MVARG} * (\text{MTG} - \text{MMCG})$$

Where:

MVARG = [insert amount] in \$/MVar

MTG = the lowest of (in MVar):

- (i) the Reactive Power Generation Capability;
- (ii) the Reactive Power Generation Capability at *rated active power* last demonstrated by Test (and measured in accordance with item 8 of this Schedule); and
- (iii) the Reactive Power Generation Capability last notified prior to the start of the relevant trading interval

MMCG = the capability for *reactive power generation* according to the *performance standard* applicable to the NSCAS Equipment, in MVar.

(b) Availability Charge – Reactive power absorption

An Availability Charge is payable by AEMO for each *trading interval* during which the NSCAS is Available and is determined by applying the formula set out below:

$$\text{MVARA} * (\text{MTA} - \text{MMCA})$$

Where:

MVARA = [insert amount] in \$/MVar

MTA = the lowest of (in MVar):

- (i) the Reactive Power Absorption Capability;
- (ii) the Reactive Power Absorption Capability at *rated active power* last demonstrated by Test (and measured in accordance with item 7 of this Schedule); and
- (iii) the Reactive Power Absorption Capability last notified prior to the start of the relevant trading interval

MMCA = the capability for *reactive power absorption* according to the *performance standard* applicable to the NSCAS Equipment, in MVar.

(c) Enabling Charge

No Enabling Charge is payable in respect of VCAS in *generation* mode.

(d) Compensation Payment

If the NSCAS Equipment is *constrained off* to generate or absorb *reactive power* during a *trading interval*, a Compensation Payment is payable by AEMO for each *trading interval* during which the NSCAS Equipment is *constrained off* and is determined by applying the following formula:

$$(\text{MP} - \text{EBP}) * \text{RDT} * 0.5$$

where:

MP = the *spot price* the NSCAS Provider will be, or has been, paid under the NER for electricity *generated* by the NSCAS Equipment during the relevant *trading interval*, being equal to TLF * RRP (both as defined in clause 3.15.6 of the NER) as calculated in respect of the *connection point* specified in item 1 of this Schedule.

EBP = the eligible *price band* for the *trading interval*. The eligible *price band* is the price of the *price band* in which the average *dispatch* target falls for the first *dispatch interval* of that *trading interval*. The average *dispatch* target for the NSCAS Equipment for a *trading interval* is the average of the NSCAS Equipment's *constrained dispatch* targets for the *dispatch intervals* that fall within that *trading interval*, in \$/MWh.

RDT = the amount by which the relevant *dispatch* target for the NSCAS Equipment was reduced for the purposes of providing the RPAS, in MW. For this purpose, the relevant *dispatch* target is the average of the *dispatch* targets for the NSCAS Equipment for the *dispatch intervals* that fall within the relevant *trading interval*.

(e) Testing Charge

A Testing Charge of \$[] is payable by AEMO for each set of Tests described in item 7. [Note: The charge should be expressed as a single charge for all required annual tests, or can be changed to an individual amount for each test parameter].

Attachment to Schedule 2 – Capability Curve

[Insert]

Schedule 3 - Voltage Control Ancillary Services (VCAS) – Synchronous Condenser Mode

Definitions

In this Schedule:

Enable or **Enabled** means the NSCAS Equipment is ready to absorb or *generate reactive power* and the NSCAS Provider has issued a Communication to AEMO to that effect under paragraph (c) of item 6 of this Schedule.

EU means the estimated power consumption of the NSCAS Equipment when operating as a *synchronous condenser*, being *[insert value]* MW.

Reactive Power Absorption Capability is specified in item 3 of this Schedule.

Reactive Power Generation Capability is specified in item 3 of this Schedule.

S3.1 Item 1: Description of NSCAS

The NSCAS to be provided by the NSCAS Provider is VCAS using a *generating unit* that is not *dispatched* to provide *energy*, but is operating in *synchronous condenser* mode, and refers to all of the *reactive power* it supplies up to the *connection point* to the *transmission network* at *[insert location of connection point]*, notwithstanding any requirement for *reactive power* while *generating*.

S3.2 Item 2: NSCAS Equipment

Location	NSCAS Equipment

S3.3 Item 3: Contracted Levels of Performance

Performance Requirement	Contracted Level of Performance
Reactive Power Generation Capability	MVAr
Reactive Power Absorption Capability	MVAr
Maximum time to be ready to absorb or <i>generate reactive power</i> from receipt of a Communication from AEMO under paragraph (a) of item 6 of this Schedule	minutes
Maximum time that the Reactive Power Generation Capability or Reactive Power Absorption Capability can be sustained	minutes

S3.4 Item 4: Minimum Availability Requirement

Minimum Availability Requirement for each Relevant Period	[]%
Exclusions (for determination of 'y' in clause 5.1(a))	Periods when the NSCAS Equipment is not <i>dispatched</i>

S3.5 Item 5: Minimum Technical Requirements

The NSCAS Equipment must:

- (a) be capable of being *dispatched*;
- (b) be capable of transmitting measurements of *active power* and *reactive power* output to AEMO every 4 seconds;
- (c) be capable of absorbing or *generating*, leading power factor or lagging *reactive power* while maintaining zero *active power* output;
- (d) be capable of sustaining the Contracted Levels of Performance of *reactive power generation* or *reactive power absorption* for at least 15 minutes; and
- (e) meet its *performance standards*.

S3.6 Item 6: Requests for Service

- (a) AEMO will issue a Communication to the NSCAS Provider requesting the NSCAS Provider to enable the NSCAS Equipment to get ready to absorb or *generate reactive power*.
- (b) On receipt of the Communication under **paragraph (a)**, the NSCAS Provider must configure the NSCAS Equipment to absorb or *generate reactive power* in accordance with that Communication.
- (c) The NSCAS Provider must issue a Communication to AEMO when the NSCAS Equipment is ready to absorb or *generate reactive power*.
- (d) If a *credible contingency event* occurs, the NSCAS Equipment must automatically operate absorb or *generate reactive power* (as necessary).
- (e) AEMO will issue a Communication to the NSCAS Provider to disable the NSCAS Equipment to cease absorbing or *generating reactive power* (as applicable).
- (f) On receipt of a Communication under **paragraph (e)** the NSCAS Provider must disable the NSCAS Equipment in order to cease absorbing or *generating reactive power* (as applicable) in accordance with that Communication.

S3.7 Item 7: Tests

Parameters to be tested	Method of testing	Timing of initial and subsequent tests
The Reactive Power Absorption Capability of the NSCAS Equipment	A Test that varies the <i>reactive power</i> output of the NSCAS Equipment within the limits specified by the NSCAS Provider (Absorption Capability Test)	[Annually on anniversary of test prior to contract or for CP fulfilment –to be specified]
The Reactive Power Generation Capability of the NSCAS Equipment	A Test that varies the <i>reactive power</i> output of the NSCAS Equipment within the limits specified by the NSCAS Provider (Generation Capability Test)	[Annually on anniversary of test prior to contract or for CP fulfilment –to be specified]
Accuracy of remote indicators	By comparison with a calibrated instrument or alternatively by comparison between measurements made by the NSCAS Provider and AEMO	[Annually on anniversary of test prior to contract or for CP fulfilment –to be specified]
Time taken to Enable the Reactive Power Generation Capability or Reactive Power Absorption Capability from the receipt of a Communication under item 7 of this Schedule	On receipt of the relevant Communication enable the NSCAS Equipment to get ready to absorb or <i>generate reactive power</i> . Record the time taken to Enable the NSCAS Equipment from the time Communication was received.	[Annually on anniversary of test prior to contract or for CP fulfilment –to be specified]

Sustained <i>reactive power generation</i> or absorption (as applicable)	Sustain <i>reactive power generation</i> or absorption for 15 minutes	[Annually on anniversary of test prior to contract or for CP fulfilment –to be specified]
--	---	---

S3.8 Item 8: Prices and Payments

(a) Availability Charge

No Availability Charge is payable in respect of VCAS in *synchronous condensor mode*.

(b) Enabling Charge

An Enabling Charge is payable by AEMO for each *trading interval* during which the VCAS is Enabled at AEMO's request and is determined by applying the formula set out below:

$$(MVARE * (MTG + MTA)) + (EP * EU)$$

Where:

MVARE = [insert amount] in \$/MVar

MTA = the lowest of (in MVar):

- (i) the Reactive Power Absorption Capability;
- (ii) the Reactive Power Absorption Capability last demonstrated by Test (and measured in accordance with item 7 of this Schedule); and
- (iii) the Reactive Power Absorption Capability last notified prior to the start of the relevant *trading interval*

MTG = the lowest of (in MVar):

- (i) the Reactive Power Generation Capability;
- (ii) the Reactive Power Generation Capability when operating in *synchronous condensor mode*, last demonstrated by Test (and measured in accordance with item 7 of this Schedule); and
- (iii) the Reactive Power Generation Capability last notified prior to the start of the relevant *trading interval*

EP = if $MP > 0$, $EP = \text{MIN}(PP, (MP \times 1.1)) * \$0.5/\text{MWh}$; or
if $MP \leq 0$, $EP = \$0/\text{MWh}$

MP = the *spot price* for electricity consumed by the NSCAS Equipment during the *trading interval*, being equal to $TLF * RRP$ (both as defined in clause 3.15.6 of the NER) as calculated in respect of the *connection point* specified in item 2 of this Schedule.

PP = the estimated price the NSCAS Provider would have paid for *energy* consumed by the NSCAS Equipment during a *trading interval*, in \$/MWh.

(c) Compensation Payment

No Compensation Payment is payable in respect of VCAS in *synchronous condensor mode*.

(d) Testing Charge

A Testing Charge of \$[] is payable by AEMO for each set of Tests described in item 7.
[Note: The charge should be expressed as a single charge for all required annual tests, or can be changed to an individual amount for each test parameter].

Annexure - Conditions Precedent

Each Condition Precedent and the corresponding Condition Precedent Fulfilment Date is listed in the table below:

	Condition	Condition Fulfilment Date
1		
2		

SIGNING PAGE

SIGNED by [insert name] as authorised representative for **AUSTRALIAN ENERGY MARKET OPERATOR LIMITED** in the presence of:

(signature of witness)

(print name of witness)

(address of witness)

(occupation of witness)

(signature of authorised representative)

By executing this agreement the signatory warrants that the signatory is duly authorised to execute this agreement on behalf of #1#

(Date signed)

SIGNED by [insert name] as authorised representative for #1# in the presence of:

(signature of witness)

(print name of witness)

(address of witness)

(occupation of witness)

(signature of authorised representative)

By executing this agreement the signatory warrants that the signatory is duly authorised to execute this agreement on behalf of #1#

(Date signed)

DRAFT