



National Electricity Amendment (Implementing integrated energy storage systems) Rule 2023 No. 2

under the National Electricity Law to the extent applied by:

- (a) the National Electricity (South Australia) Act 1996 of South Australia;
- (b) the Electricity (National Scheme) Act 1997 of the Australian Capital Territory;
- (c) the Electricity - National Scheme (Queensland) Act 1997 of Queensland;
- (d) the Electricity - National Scheme (Tasmania) Act 1999 of Tasmania;
- (e) the National Electricity (New South Wales) Act 1997 of New South Wales;
- (f) the National Electricity (Victoria) Act 2005 of Victoria;
- (g) the National Electricity (Northern Territory) (National Uniform Legislation) Act 2015 of the Northern Territory; and
- (h) the Australian Energy Market Act 2004 of the Commonwealth.

The Australian Energy Market Commission makes the following Rule under the National Electricity Law.

Anna Collyer
Chairperson
Australian Energy Market Commission

National Electricity Amendment (Implementing integrated energy storage systems) Rule 2023 No. 2

1 Title of Rule

This Rule is the *National Electricity Amendment (Implementing integrated energy storage systems) Rule 2023 No. 2*.

2 Commencement

Schedule 1 of this Rule commences operation on 11 May 2023.

Schedule 2 of this Rule commences operation on 11 May 2023.

Schedule 3 of this Rule commences operation on 11 May 2023.

3 Amendment to National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13

The National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 is amended as set out in Schedule 1.

4 Amendment to National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13

The National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 is amended as set out in Schedule 2.

5 Amendment to the National Electricity Rules

The National Electricity Rules are amended as set out in Schedule 3.

**Schedule 1 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

(Clause 3)

**[1] Schedule 1 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

In Item [53] of Schedule 1 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13, in clause 2.3.4(i), omit "any *load* at".

**[2] Schedule 1 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

In Item [68] of Schedule 1 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13, omit clause 2.3D.1(f)(3) and substitute:

- (3) if there is a *retail customer* or *SRA customer* at the relevant *connection point*, the applicant has an arrangement with that *retail customer* or *SRA customer* for the supply of *market ancillary services*,

**[3] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [12] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[12] Clause 3.6.3 Distribution losses

Omit clause 3.6.3(b1), excluding the "Note", and substitute:

- (b1) Where a *Generator* or *Integrated Resource Provider* (including in its capacity as a *Small Resource Aggregator*) meets the reasonable cost of the *Distribution Network Service Provider* in performing the necessary calculation in respect of a *distribution connected unit* of actual or forecast annual production of electricity of up to 40 GWh or *rated active power* of up to 10 MW, the *Distribution Network Service Provider* must calculate a site specific *distribution loss factor* that, notwithstanding any other provision of the *Rules* to the contrary, for the purposes of the *Rules* is to apply in respect of that *distribution connected unit* as though the *distribution connected unit* were a unit of more than 10 MW *rated active power* or more than 40 GWh annual production.

**[4] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [19] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[19] Clause 3.7.1 Administration of PASA

In clause 3.7.1(c)(1), omit "*Scheduled Generators, Market Customers*," and substitute "*Scheduled Generators, Scheduled Integrated Resource Providers, Market Customers, Integrated Resource Providers* in relation to their *scheduled loads*,".

**[5] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [228] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[228] Clause 3.8.19 Dispatch inflexibilities

Omit clause 3.8.19(d) and substitute:

- (d) In respect of *scheduled generating units* (other than *slow start generating units*), *scheduled loads* or *wholesale demand response units*, *Market Participants* may provide *AEMO*, as part of a *dispatch bid* in respect of the relevant *scheduled resource*, with a *dispatch inflexibility profile*.

**[6] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [229] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[229] [Deleted]

**[7] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [271] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[271] Clause 3.8.23 Failure to conform to dispatch instructions
excluding wholesale demand response units**

Omit clause 3.8.23(c)(5) and substitute:

- (5) should a *Market Customer*, or an *Integrated Resource Provider* in respect of a *scheduled load*, not meet the requests set out in subparagraphs (1) and (2) within a reasonable time of the request, or if *AEMO* is not satisfied that the *scheduled load* will respond to future *dispatch instructions* as required, *AEMO* acting reasonably may invoke a *default bid* lodged by the relevant *Market Participant* or apply *constraints* as it deems appropriate.

**[8] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

After Item [442] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13, insert:

[442A] Clause 3.14.3 Conditions for suspension of the spot market

In clause 3.14.3(d)(1)(iii), omit "*Market Customer*" and substitute "*Market Participant*".

**[9] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [446] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[446] Clause 3.14.5A Payment of compensation due to market
suspension pricing schedule periods**

In clause 3.14.5A(e), in the definition of "FC", omit "for the relevant *Generator*" and substitute "for the relevant *Scheduled Generator* or *Scheduled Integrated Resource Provider*".

**[10] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [447] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[447] Clause 3.14.5A Payment of compensation due to market
suspension pricing schedule periods**

In clause 3.14.5A(e), in the definition of "E", omit "for the relevant *Generator*" and substitute "for the relevant *Scheduled Generator* or *Scheduled Integrated Resource Provider*".

**[11] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [448] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[448] Clause 3.14.5A Payment of compensation due to market
suspension pricing schedule periods**

In clause 3.14.5A(e), in the definition of "VOC", omit "for the relevant *Generator*" and substitute "for the relevant *Scheduled Generator* or *Scheduled Integrated Resource Provider*".

**[12] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [517] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[517] Clause 3.15.7 Payment to Directed Participants

In clause 3.15.7(c), in the explanation of "AMP", after "*Semi-Scheduled Generators*," insert "*Scheduled Integrated Resource Providers, Integrated Resource Providers* in respect of *scheduled loads*,".

**[13] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

After Item [577] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 insert:

**[577A] Clause 3.15.10 Administered price cap or administered floor
price compensation payments**

In clause 3.15.10(b), omit the explanation of " $\sum E_i$ " and substitute " $\sum E_i$ is the sum of all amounts determined as " E_i " in accordance with this clause 3.15.10 for all *Cost Recovery Market Participants* in the cost recovery region."

**[14] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy
storage systems into the NEM) Rule
2021 No. 13**

Omit Item [583] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[583] Clause 3.15.10C Intervention and Market Suspension Pricing
Schedule Period Settlements**

In clause 3.15.10C(a)(4), omit "*Market Customer, Market Generator and Market Small Generation Aggregator*" and substitute "*Cost Recovery Market Participant*".

**[15] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [584] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[584] Clause 3.15.10C Intervention and Market Suspension Pricing
Schedule Period Settlements**

In clause 3.15.10C(a)(4), omit "clause 3.15.8(f)(2) TNSCASP" and substitute "clause 3.15.8(f)(2), ".

**[16] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [593] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[593] Clause 3.15.10C Intervention and Market Suspension Pricing
Schedule Period Settlements**

In clause 3.15.10C(b)(7)(i), omit "clause 3.15.8(f)(2) TNSCASP" and substitute "clause 3.15.8(f)(2), TNSCAS".

**[17] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [594] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[594] Clause 3.15.10C Intervention and Market Suspension Pricing
Schedule Period Settlements**

In clause 3.15.10C(b)(7)(ii), omit "*Market Customer, Market Generator or Market Small Generation Aggregator, as the case may be,*" and substitute "*Cost Recovery Market Participant*".

**[18] Schedule 3 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [21] of Schedule 3 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[21] Clause 4.8.5A Determination of the latest time for AEMO
intervention**

In clause 4.8.5A(d), after "*Semi-Scheduled Generator*" insert ", *Scheduled Integrated Resource Provider, Integrated Resource Provider* in respect of its *scheduled load*".

**[19] Schedule 3 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [22] of Schedule 3 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[22] Clause 4.8.5A Determination of the latest time for AEMO
intervention**

Omit clause 4.8.5A(e)(3) and substitute:

- (3) estimates of the relevant costs to be incurred by the *Registered Participant* should it be the subject of a *direction*, but only if *AEMO* considers it reasonably likely that the *Registered Participant* will be subject to a *direction*.

**[20] Schedule 3 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [23] of Schedule 3 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[23] Clause 4.8.5A Determination of the latest time for AEMO
intervention**

In clause 4.8.5A(f), omit "*Scheduled Network Service Provider, Scheduled Generator, Semi-Scheduled Generator or Market Customer*" and substitute "*Registered Participant*".

**[21] Schedule 3 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [24] of Schedule 3 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[24] Clause 4.8.5A Determination of the latest time for AEMO intervention

Omit clause 4.8.5A(h) and substitute:

- (h) *AEMO* must treat any information provided in response to a request under paragraph (d) as *confidential information* and use it for the sole purpose of assessing to which *Registered Participant* it should issue *directions*.

**[22] Schedule 3 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [49] of Schedule 3 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[49] New Clause 4.9.2C Aggregated dispatch conformance

After clause 4.9.2B, insert a new clause 4.9.2C:

4.9.2C Aggregated dispatch conformance

- (a) This clause applies to an *integrated resource system* or a *generating system* that in either case comprises more than one *scheduled resource* and where *AEMO* gives separate *dispatch instructions* for each *scheduled resource*.
- (b) A *Registered Participant* for an *integrated resource system* or *generating system* to which this clause applies may, in accordance with the *power system operating procedure* made under paragraph (d), comply in aggregate (**aggregated dispatch conformance**) with the *dispatch instructions* for a *trading interval* for two or more of the *scheduled resources* comprised in the *integrated resource system* or *generating system*, excluding any *scheduled resource* for which resource level compliance has been specified in accordance with paragraph (c).
- (c) *AEMO* may specify in a *dispatch instruction* for a *scheduled resource* in an *integrated resource system* or *generating system* to which this clause applies that the *scheduled resource* the subject of the *dispatch instruction* is required to operate in accordance with that *dispatch instruction* (**resource level compliance**) where a *network constraint* would be violated if the relevant *scheduled resource* were to operate other than in accordance with the *dispatch instruction*, due to technical characteristics of the relevant *scheduled resource*.
- (d) *AEMO* must make, as a *power system operating procedure*, a procedure setting out:
 - (1) for the purposes of paragraph (b), permitted forms of aggregated dispatch conformance by one or more *scheduled resources*

comprised in an *integrated resource system* or *generating system*; and

- (2) arrangements for *AEMO* to specify when resource level compliance is required for the purposes of paragraph (c).

**[23] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

In Item [1] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13, in paragraph (a) of the definition of "*Affected Load Participant*", after "in respect of its *scheduled bidirectional unit*" insert "or *scheduled load*".

**[24] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

In Item [1] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13, in paragraph (b) of the definition of "*Affected Load Participant*", after "in respect of its *scheduled bidirectional unit*" insert "or *scheduled load*".

**[25] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

In Item [1] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13, in the definition of "*affected production unit*", omit "an *Integrated Resource Provider*" and substitute "a *Scheduled Integrated Resource Provider*".

**[26] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

In Item [2] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13, in paragraph (a) of the definition of "*Affected Participant*", omit "an *Integrated Resource Provider* in respect of its *scheduled generating unit* or" and substitute "a *Scheduled Integrated Resource Provider* in respect of".

**[27] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

In Item [2] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13, in paragraph (c) of the definition of "***Affected Participant***", omit "an *Integrated Resource Provider* in respect of its *scheduled generating unit* or" and substitute "a *Scheduled Integrated Resource Provider* in respect of".

**[28] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

In Item [2] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13, in the definition of "***Generator***", omit "or as an *Integrated Resource Provider*".

**[29] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

In Item [2] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13, in the definition of "***Semi-Scheduled Generator***", omit "any *generating unit* or *bidirectional unit* that is a *coupled production unit* is" and substitute "any *generating unit*, or *bidirectional unit* that is a *coupled production unit*, is".

**Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

(Clause 4)

**[1] Schedule 1 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [13] of Schedule 1 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[13] Clause 2.2.2 Scheduled production units

In clause 2.2.2(c), omit "clause 2.2.2(b1)" and substitute "paragraph (b1), (b3) or (b4)".

**[2] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [109] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[109] Clause 3.8.3A Ramp rates

In clause 3.8.3A(a)(2), omit "offers for *dispatch*" and substitute "*dispatch bids*".

**[3] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [121] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[121] Clause 3.8.3A Ramp rates

In clause 3.8.3A(d), after "the relevant *generating unit*," insert "*scheduled bidirectional unit*".

**[4] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [248] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[248] Clause 3.8.21 On-line dispatch process

In clause 3.8.21(k), omit "*scheduled load, wholesale demand response unit or generating unit*" and substitute "*scheduled resource*".

**[5] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [253] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[253] Clause 3.8.22 Rebidding

In clause 3.8.22(b), in the end paragraph, omit "*a dispatch offer*".

**[6] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [350] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[350] Clause 3.13.2 Systems and procedures

In clause 3.13.2(f), omit "*Scheduled Generators, Semi-Scheduled Generators* and".

**[7] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [390] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[390] Clause 3.13.4 Spot market

In clause 3.13.4(f)(6)(iii), omit "*the dispatch of generation or load*" and substitute "*dispatch*".

**[8] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [391] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[391] Clause 3.13.4 Spot market

In clause 3.13.4(h), after "*or generating unit*", insert "*or bidirectional unit*".

**[9] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [392] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[392] Clause 3.13.4 Spot market

In clause 3.13.4(h1), after "or *generating unit*", insert "or *bidirectional unit*".

**[10] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [393] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[393] Clause 3.13.4 Spot market

In clause 3.13.4(n), omit "*regional* and total *interconnected* system *loads* and *energies*" and substitute "MW *load* and *generation* for each *region* and the *power system*".

**[11] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [394] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[394] Clause 3.13.4 Spot market

In clause 3.13.4(p), omit the opening paragraph and substitute:

(p) Each *day*, in accordance with the *timetable*, AEMO must publish details of final *dispatch bids* and *market ancillary service bids* received and actual availabilities of *scheduled resources* and *market ancillary services* for the previous *trading day*, including:

**[12] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [405] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[405] Clause 3.13.4 Spot market

In clause 3.13.4(t), after "that is less than 30 MW" insert "or *non-scheduled bidirectional units* or *non-scheduled integrated resource systems* that have a nameplate rating that is less than 5 MW".

[13] Schedule 2 Amendment to National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13

Omit Item [491] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[491] Clause 3.15.6A Ancillary service transactions

Omit clause 3.15.6A(e) and substitute:

- (e) In each *trading interval*, in relation to each *Cost Recovery Market Participant*, for each *region*, an ancillary services transaction occurs, which results in a *trading amount* for the *Cost Recovery Market Participant* determined in accordance with the following formula:

$$TA_{i,R} = \sum \left(\left(\frac{SRP_i \times RBF_{i,R}}{2} \right) \times \frac{TCE_{i,R}}{ATCE_{i,R}} \right) \times -1$$

where:

subscript i	refers to the relevant <i>trading interval</i> ;
subscript R	refers to the relevant <i>region</i> ;
$TA_{i,R}$ (in \$)	= the <i>trading amount</i> payable by the <i>Cost Recovery Market Participant</i> in respect of the relevant <i>region</i> and <i>trading interval</i> ;
SRP_i (in \$)	= the amount payable by <i>AEMO</i> in respect of the <i>trading interval</i> under an individual <i>ancillary services agreement</i> in respect of the provision of a specific <i>SRAS</i> or, for the purposes of clause 4.3.6(q), the compensation payable by <i>AEMO</i> under clause 4.3.6(o) for the relevant <i>billing period</i> ;
$RBF_{i,R}$ (number)	= the latest regional benefit factor assigned to the provision of the relevant <i>SRAS</i> under an individual <i>ancillary services agreement</i> in respect of the relevant <i>region</i> and <i>trading interval</i> , as determined by <i>AEMO</i> under paragraph (c7);
$TCE_{i,R}$ (in MWh)	= the sum, for all <i>connection points</i> of the <i>Cost Recovery Market Participant</i> located in the <i>region</i> , of the <i>adjusted</i>

consumed energy amount for the
connection point for the *trading interval*;
and

$ATCE_{i,R}$ (in MWh) = the sum, for all *connection points*
located in the *region*, of the *adjusted*
consumed energy amount for the
connection point for the *trading interval*.

**[14] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [492] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[492] Clause 3.15.6A Ancillary service transactions

In clause 3.15.6A, before paragraph (f), insert:

**Trading amount calculation for very fast raise service, fast raise service,
slow raise service or delayed raise service**

**[15] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [494] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[494] Clause 3.15.6A Ancillary service transactions

In clause 3.15.6A, before paragraph (g), insert:

**Trading amount calculation for very fast lower service, fast lower
service, slow lower service or delayed lower service**

**[16] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [543] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[543] Clause 3.15.8 Funding of Compensation for directions

In clause 3.15.8(f)(2), omit "TNSCASP" and substitute "TNSCAS".

[17] Schedule 2 **Amendment to National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13**

Omit Item [546] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[81] Clause 3.15.8 **Funding of Compensation for directions**

Omit clause 3.15.8(g), including the "Note", and substitute:

- (g) Any compensation payable by *AEMO* under clause 3.12.2 and 3.15.7 not recovered under paragraph (b) and paragraph (e) must be recovered from *Cost Recovery Market Participants*. *AEMO* must, in accordance with the *intervention settlement timetable*, calculate a figure for each *Cost Recovery Market Participant* in each *region* by applying the following formula:

$$CRP = \frac{TSOE - TCE}{RATSOE - RATCE} \times \frac{RB}{\sum RB} \times CRA \times -1$$

where:

CRP (in \$)	=	the amount payable or receivable by a <i>Cost Recovery Market Participant</i> under this paragraph (g);
TSOE (in MWh)	=	the sum, for all <i>connection points</i> of the <i>Cost Recovery Market Participant</i> located in the <i>region</i> , of the <i>adjusted sent out energy</i> in all relevant <i>intervention price trading intervals</i> ;
TCE (in MWh)	=	the sum, for all <i>connection points</i> of the <i>Cost Recovery Market Participant</i> located in the <i>region</i> , of the <i>adjusted consumed energy</i> amounts in all relevant <i>intervention price trading intervals</i> ;
RATSOE (in MWh)	=	the sum, for all <i>connection points</i> located in the <i>region</i> of all <i>Cost Recovery Market Participants</i> , of the <i>adjusted sent out energy</i> amounts in all relevant <i>intervention price trading intervals</i> ;
RATCE (in MWh)	=	the sum, for all <i>connection points</i> located in the <i>region</i> of all <i>Cost</i>

Recovery Market Participants, of the *adjusted consumed energy* amounts in all relevant *intervention price trading intervals*;

RB (number) = the regional benefit determined by *AEMO* under paragraph (b1) at the time of issuing the *direction*; and

CRA = the *compensation recovery amount*.

**[18] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [554] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[554] Clause 3.15.8A Funding of compensation for market
suspension pricing schedule periods**

In clause 3.15.8A(g)(2), omit "TNSCASP" and substitute "TNSCAS".

**[19] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [564] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[564] Clause 3.15.9 Reserve settlements

In clause 3.15.9(e)(3), in the explanation of "UC", in paragraph 2, omit "*Market Customers*" and substitute "*Affected Load Participants*".

**[20] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [587] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[587] Clause 3.15.10C Intervention and Market Suspension Pricing
Schedule Period Settlements**

In clause 3.15.10C(b)(2), omit all references to "*Market Customer*" and substitute "*Affected Load Participant*".

**[21] Schedule 2 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [600] of Schedule 2 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

**[600] Clause 3.15.10C Intervention and Market Suspension Pricing
Schedule Period Settlements**

In clause 3.15.10C(c)(3)(iii)(B), omit "TNSCASP" and substitute "TNSCAS".

**[22] Schedule 3 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [137] of Schedule 3 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[137] Clause 4A.G.14 Applications to the AER

In clause 4A.G.14(a), after "*A Market Generator*" insert "*or Integrated Resource Provider*".

**[23] Schedule 3 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [138] of Schedule 3 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[138] Clause 4A.G.14 Applications to the AER

In clause 4A.G.14(c)(1), after "*a Market Generator*" insert "*or Integrated Resource Provider*".

**[24] Schedule 3 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [139] of Schedule 3 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[139] Clause 4A.G.14 Applications to the AER

In clause 4A.G.14(d)(1), after "*the Market Generator*" insert "*or Integrated Resource Provider*".

**[25] Schedule 4 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [11] of Schedule 4 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[11] Clause 5.1.2 Overview of Part B and connection and access under the Rules

In clause 5.1.2(d) table, in row 12, in the third paragraph, omit "*non-registered embedded generator*" and substitute "*non-registered DER provider*".

**[26] Schedule 4 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [13] of Schedule 4 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[13] Clause 5.1.2 Overview of Part B and connection and access under the Rules

In clause 5.1.2(e)(2), omit "rules 5.3AA(f) (*negotiated use of system charges*) or 5.3AA(h) (avoided charges for the locational component of *prescribed TUOS services*)" and substitute "rules 5.3AA(f) or 5.3AA(h)".

**[27] Schedule 4 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [194] of Schedule 4 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[194] Clause S5.2.2 Application of Settings

In clause S5.2.2, in the first paragraph, after each occasion of "A *Generator*" insert "or *Integrated Resource Provider*".

**[28] Schedule 4 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [512] of Schedule 4 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[512] Clause S5.5.3 Network and plant technical data of equipment at or near connection point

In schedule 5.5.3 table, under the subheading "**Circuits Connecting Distribution Connected Units to the Network:**", omit "and *generating*".

systems" and substitute ", generating systems, bidirectional units and integrated resource systems".

**[29] Schedule 4 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [531] of Schedule 4 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[531] [Deleted]

**[30] Schedule 5 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [43] of Schedule 5 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[43] [Deleted]

**[31] Schedule 5 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [70] of Schedule 5 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[70] Clause 9.12.2 Customers

In clause 9.12.2, omit "2.3.1(e), and for the purposes of clause 2.4.2(b) in so far as it relates to *Customers*" and substitute "2.3.1A(a)".

**[32] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

In Item [1] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13, omit the definition of "***bidirectional unit***" and substitute:

bidirectional unit

- (a) Subject to paragraphs (b) and (c), a *production unit* that also consumes electricity.

Note:

Consumption of electricity includes the use of electricity to charge a *production unit* or to pump water for a pumped hydro *production unit*.

- (b) For paragraph (a), disregard *auxiliary load*.
- (c) A *bidirectional unit* within the meaning of paragraph (a) of this definition, that has been classified as a *scheduled generating unit* under clause 2.2.2(b2), is taken for the purposes of the *Rules* (except rules 2.1A and 2.1B and clauses 2.2.2(a) to (b4) or as otherwise provided in the *Rules*) to be a *generating unit* (and not a *bidirectional unit*) and a *scheduled load*.

Note:

Clause 2.2.2(b2) provides for the classification of a *bidirectional unit* that is not capable of transitioning linearly from consuming to producing electricity and vice versa. In general terms, these units are *bidirectional units* for registration and classification purposes and otherwise, are *generating units* and *scheduled loads*. Unless the system the unit is part of would satisfy the definition of *integrated resource system* for other reasons, in general terms the system will be an *integrated resource system* for registration and classification purposes and otherwise, a *generating system* and a *scheduled load*.

[33] Schedule 6 Amendment to National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13

In Item [1] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13, omit the definition of "*integrated resource system*" and substitute:

integrated resource system

- (a) Subject to the remaining paragraphs of this definition, any of the following:
 - (1) a system comprising one or more *bidirectional units* (and which may also comprise one or more *generating units* or other *connected plant* that is not part of a *bidirectional unit*); and
 - (2) a system comprising one or more *generating units* (and which may also comprise other *connected plant*) where the *connection point* for the system is used to *supply* electricity for consumption on the system side of the *connection point*.
- (b) For the purposes of paragraph (a)(2), disregard consumption to the extent it is *auxiliary load*.
- (c) For the purposes of clause 2.1B.2(b)(4), clause 4.9.2 and Chapter 5, an *integrated resource system* includes auxiliary or *reactive plant* that is located on the *Integrated Resource Provider's* side of the *connection point* and is necessary for the *integrated resource system* to meet its *performance standards*.
- (d) For the purposes of the *Rules* (except rules 2.1A and 2.1B and except as otherwise provided in the *Rules*) a *bidirectional unit* that has been

classified as a *scheduled generating unit* as provided for in clause 2.2.2(b2) is taken to be a *generating unit* (and not a *bidirectional unit*) under paragraph (a) of this definition.

Note:

In relation to paragraph (d), refer to the note to *bidirectional unit*.

**[34] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

In Item [1] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13, omit the definition of "*SRA customer*" and substitute:

SRA customer

A person who owns, operates or controls, or proposes to own, operate or control, a *small generating unit* or *small bidirectional unit* and who has an agreement with a *Small Resource Aggregator* relating to the *small generating unit* or *small bidirectional unit* (as the case may be) under which the *Small Resource Aggregator* is *financially responsible* for the *small resource connection point* for the relevant unit.

**[35] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [5] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[5] Chapter 10 Glossary

In the definition of "*adverse system strength impact*", in paragraph (b), after "*generating system*," insert "*integrated resource system*,".

**[36] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [35] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[35] Chapter 10 Glossary

In the definition of "*inertia*", after "from a *generating unit*," insert "*bidirectional unit*,".

**[37] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [40] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[40] Chapter 10 Glossary

In the definition of "*loading level*", after "of a *generating unit*," insert "*bidirectional unit*".

**[38] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [50] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[50] [Deleted]

**[39] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [74] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[74] Chapter 10 Glossary

In the definition of "*short circuit ratio*", omit paragraphs (b) and (c) and substitute:

- (b) in the case of a *market network service facility*, its *rated power transfer capability* (expressed in MW);
- (c) in the case of an *inverter based load*, its *maximum demand* at the *connection point* (expressed in MW); and
- (d) in the case of an *integrated resource system*, its *rated active power* (expressed in MW).

**[40] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [81] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[81] Chapter 10 Glossary

In the definition of "*synchronising*", omit "generating unit" and substitute "production unit".

**[41] Schedule 6 Amendment to National Electricity
Amendment (Integrating energy storage
systems into the NEM) Rule 2021 No. 13**

Omit Item [84] of Schedule 6 of the National Electricity Amendment (Integrating energy storage systems into the NEM) Rule 2021 No. 13 and substitute:

[84] Chapter 10 Glossary

In the definition of "*Transmission Network User*", omit paragraphs (a) and (b) and substitute:

- (a) a *Generator* whose *generating unit*;
- (b) a *Network Service Provider* whose *network*; and
- (c) an *Integrated Resource Provider* whose *production unit*,

Schedule 3 Amendment to the National Electricity Rules

(Clause 5)

[1] Clause 2.3.4 Market connection point classification

In clause 2.3.4(i), omit "any *load* at".

[2] Clause 7.8.2 Metering installation components

Omit clause 7.8.2(a1) and substitute:

- (a1) *AEMO* may exempt a *Metering Provider* at a *connection point* from complying with the data storage requirements under subparagraph (a)(9) for type 4 *metering installations* that were installed prior to 1 December 2018. *AEMO* may only grant an exemption under this clause where it is reasonably satisfied that the *Metering Provider* will be able to otherwise satisfy the requirements of [Chapter 7](#).

[3] Clause 7.8.2 Metering installation components

Omit clause 7.8.2(b1) and substitute "[Deleted]".

[4] Clause 11.103.1 Definitions

In clause 11.103.1, omit the definition of "Excluded metering installations" and substitute:

Excluded metering installations means types 1, 2, 3, 4 and 7 *metering installations*.

[5] Clause 11.103.1 Definitions

In clause 11.103.1, omit all definitions of "new clause 7.8.2(b1)".

[6] Clause 11.145.11 Application of the Amending Rule to existing applications to connect

In clause 11.145.11(b)(3)(i), omit "access standards commencement date" and substitute "effective date".

[7] Chapter 11 Part ZZZZU Integrating energy storage systems into the NEM

After clause 11.145.16, insert:

11.145.17 Early implementation of non-energy cost recovery arrangements

- (a) Despite anything to the contrary in the *Rules*, for 2 June 2024:

- (1) the *trading amounts* of *Market Participants* determined under the provisions listed in paragraph (b) must be calculated as if the date for commencement of all Schedules of the Amending Rule (other than Schedule 7) were 2 June 2024 and not 3 June 2024; and
 - (2) *AEMO* must conduct *settlements* (including with respect to other provisions in Chapter 3 not listed in paragraph (b)) in a manner it reasonably considers is best calculated to give effect to subparagraph (1).
- (b) For subparagraph (a)(1), the provisions are:
- (1) clause 3.15.6A;
 - (2) clause 3.15.8;
 - (3) clause 3.15.8A;
 - (4) clause 3.15.9;
 - (5) clause 3.15.10; and
 - (6) clause 3.15.10C.

[END OF RULE AS MADE]
