

Voluntarily Scheduled Resource Guidelines

Prepared by: AEMO Operations

Version: 1.2

Effective date: 23 May 2027

Status: FINAL

Approved for distribution and use by:

Approved by: Michael Gatt

Title: Executive General Manager Operations

Date: 27 November 2025

aemo.com.au

New South Wales | Queensland | South Australia | Victoria | Australian Capital Territory | Tasmania | Western Australia

Australian Energy Market Operator Ltd ABN 94 072 010 327

Contents

Current version release details	3
1. Introduction	4
1.1. Purpose and scope	4
1.2. Definitions and interpretation	5
1.3. Related documents	8
2. Voluntarily scheduled resource nomination	9
2.1. Requirements of a <i>qualifying resource, voluntarily scheduled resource and Voluntarily Scheduled Resource Provider</i>	9
2.2. Application process to nominate a qualifying resource as a <i>voluntarily scheduled resource</i>	13
2.3. Effect of approval for nomination as a <i>voluntarily scheduled resource</i>	16
2.4. Disaggregation of <i>voluntarily scheduled resources</i>	18
3. Portfolio management	19
3.1. Portfolio management requirements for a <i>Voluntarily Scheduled Resource Provider</i>	19
3.2. Portfolio updates	20
4. Determining VSR zones and loss factors	23
4.1. <i>AEMO's methodology for determining loss factors</i>	23
4.2. <i>AEMO's methodology for determining zones</i>	23
4.3. Zonal aggregation requirements	25
4.4. Review and changes to zones	26
5. Capability assessment	27
5.1. Initial capability assessment during nomination	27
5.2. Aggregated telemetry check	28
5.3. Capability re-assessment due to significant portfolio changes	29
5.4. Aggregated telemetry and communications equipment requirements	30
6. Deactivation and temporary hibernation	32
6.1. Deactivation	33
6.2. Temporary hibernation	34
6.3. Obligations of a <i>Voluntarily Scheduled Resource Provider with an inactive voluntarily scheduled resource or hibernated voluntarily scheduled resource</i>	36
6.4. Notice periods and information	38
7. Bidding and dispatch	43
7.1. Bid submission format	43
7.2. Dispatch bids	44
7.3. Bidding for <i>inactive voluntarily scheduled resources or hibernated voluntarily scheduled resources</i>	46
7.4. Bid validation	46
7.5. Dispatch instructions	47
8. Conformance	47
9. Metering	48

10. Data and information sharing	49
10.1. Data sharing between <i>Voluntarily Scheduled Resource Providers</i> and <i>Distribution Network Service Providers</i> and (where relevant) <i>Transmission Network Service Providers</i>	49
10.2. Disclosure of data collected by AEMO from <i>Voluntarily Scheduled Resource Providers</i> to <i>Distribution Network Service Providers</i> and (where relevant) <i>Transmission Network Service Providers</i>	49
Version release history	52

Tables

Table 1	Sections of the Guidelines and specifications covered under NER 3.10A.3	4
Table 2	Minimum threshold requirements eligible according to the <i>voluntarily scheduled resource</i> dispatch sub-type	10
Table 3	Description of the requirements for a <i>qualifying resource</i> , <i>voluntarily scheduled resource</i> , and <i>Voluntarily Scheduled Resource Provider/financially responsible Market Participant</i>	11
Table 4	Information requirements for nomination applications of a voluntarily scheduled resource	15
Table 5	Factors to assess the suitability of zone classifications	23
Table 6	VSR zones and their constituent transmission congestion modelling zones.....	24
Table 7	Aggregated telemetry data requirements for a <i>voluntarily scheduled resource</i>	31
Table 8	Modifications that apply to a <i>voluntarily scheduled resource</i> while it is inactive or hibernated, except in relation to any market ancillary services to be provided by any qualifying resource forming part of the voluntarily scheduled resource.....	37
Table 9	Notice periods for the different notice types that a <i>Voluntarily Scheduled Resource Provider</i> may submit to AEMO change the status of a <i>voluntarily scheduled resource</i>	39
Table 10	Minimum information requirements for notices to change a <i>voluntarily scheduled resource's</i> participation status.....	41
Table 11	AEMO's processes for sharing <i>voluntarily scheduled resource</i> data collected from <i>Voluntarily Scheduled Resource Providers</i> with <i>Distribution Network Service Providers</i> and where relevant <i>Transmission Network Service Providers</i>	51

Figures

Figure 1	Process flows for changes to a <i>voluntarily scheduled resource's</i> participation status using the relevant notice types	42
----------	---	----

Current version release details

Version	Effective date	Summary of changes
1.2	23 May 2027	Final Guidelines

Note: There is a full version history at the end of this document.

1. Introduction

1.1. Purpose and scope

These are the *voluntarily scheduled resource guidelines* (Guidelines) made under clause 3.10A.3 of the National Electricity Rules (NER).

These Guidelines have effect only for the purposes set out in the NER. The NER and the National Electricity Law (NEL) prevail over these Guidelines to the extent of any inconsistency.

These Guidelines have been developed to assist *Voluntarily Scheduled Resource Providers* understand and assess the requirements for participation in *central dispatch*. Table 1 outlines the specifications covered in these Guidelines under NER 3.10A.3.

Table 1 Sections of the Guidelines and specifications covered under NER 3.10A.3

Guidelines section	Specifications
VSR nomination	<ul style="list-style-type: none"> Requirements for nominating one or more <i>qualifying resources</i> as a <i>voluntarily scheduled resource</i> in accordance with NER 3.10A.1 A requirement that the <i>Voluntarily Scheduled Resource Provider</i> is the <i>financially responsible Market Participant</i> in respect of a <i>market connection point</i> nominated as a <i>voluntarily scheduled resource</i> The minimum threshold for nameplate rating, or combined nameplate rating, of a <i>voluntarily scheduled resource</i>
Portfolio management	<ul style="list-style-type: none"> The requirements and process for aggregation of <i>voluntarily scheduled resources</i> in accordance with NER 3.8.3, including the circumstances in which AEMO may request <i>Voluntarily Scheduled Resource Providers</i> that have aggregated <i>voluntarily scheduled resources</i> to declare individual qualifying resource availability and operating status to AEMO pursuant to NER 3.8.3(f1) or to disaggregate pursuant to NER 3.8.3(b6)
Determining VSR zones and loss factors	<ul style="list-style-type: none"> A methodology for determining zones in which <i>voluntarily scheduled resources</i> participate in <i>central dispatch</i> as well as the <i>loss factor</i> that is to apply in each zone for the purpose of NER 3.8.6(h) Requirements and conditions on <i>Voluntarily Scheduled Resource Providers</i> for aggregating <i>qualifying resources</i> as <i>voluntarily scheduled resources</i> in accordance with NER 3.8.3 (including that all <i>qualifying resources</i> that form part of an aggregated <i>voluntarily scheduled resource</i> must be within the same zone) Guidance for <i>Voluntarily Scheduled Resource Providers</i> on processes for the aggregation of <i>voluntarily scheduled resources</i> into the zones determined Validation processes for AEMO Where AEMO proposes to implement a change to any zone in which <i>voluntarily scheduled resources</i> participate in <i>central dispatch</i> (including implementing a new zone), guidance for <i>Voluntarily Scheduled Resource Providers</i> on the processes and timing for the implementation of such change in zones, including the minimum lead time before the change would take effect
Capability assessment	<ul style="list-style-type: none"> A framework for testing the capabilities of <i>qualifying resources</i> prior to their request for nomination as a <i>voluntarily scheduled resource</i> The types of data to be provided by a <i>Voluntarily Scheduled Resource Provider</i> to AEMO and by AEMO to a <i>Voluntarily Scheduled Resource Provider</i> Information about the requirements for telemetry and communications equipment
Deactivation and temporary hibernation	<ul style="list-style-type: none"> The matters required by NER 3.10A.2 in relation to deactivation and hibernation of <i>voluntarily scheduled resources</i>. The process of submitting and the information requirements of deactivation, reactivation, hibernation and resumption notices. The conditions AEMO may impose on mode switching An explanation provided for how inactive <i>voluntarily scheduled resources</i> are treated in central dispatch by AEMO. The process and timeline of the cessation of a <i>voluntarily scheduled resource</i>.

Bidding and dispatch	<ul style="list-style-type: none"> Operational requirements for a <i>voluntarily scheduled resource</i> Any other information that AEMO considers reasonably necessary
Conformance	<ul style="list-style-type: none"> The <i>dispatch</i> conformance criteria
Metering	<ul style="list-style-type: none"> The acceptable types of metering installation for participating <i>market connection points</i>
Data and information sharing	<ul style="list-style-type: none"> The processes for: <ul style="list-style-type: none"> <i>Voluntarily Scheduled Resource Providers</i> to share data with <i>Distribution Network Service Providers</i> or (where relevant) <i>Transmission Network Service Providers</i> the disclosure of data collected by AEMO from <i>Voluntarily Scheduled Resource Providers</i> to <i>Distribution Network Service Providers</i> and <i>Transmission Network Service Providers</i> (as applicable), including obligations of confidentiality that will apply to any such disclosures

1.2. Definitions and interpretation

1.2.1. Glossary

Terms defined in the National Electricity Law and the NER have the same meanings in these Guidelines unless otherwise specified in this clause.

Terms defined in the NER are intended to be identified in these Guidelines by italicising them, but failure to italicise a defined term does not affect its meaning.

In addition, the words, phrases and abbreviations in the table below have the meanings set out opposite them when used in these Guidelines.

Term	Definition
Analogue Value	Numeric representation of a continuous value (for example, a power flow)
Battery only voluntarily scheduled resource	A <i>voluntarily scheduled resource</i> exclusively comprised of one or more qualifying resources that are classified as <i>market bidirectional units</i> that are <i>non-scheduled bidirectional units</i> . The technology type of these <i>bidirectional units</i> must also be exclusively battery only, to ensure that they're all capable of providing state of charge values.
Contingency FCAS	Frequency control ancillary services, identified by NER 3.11.2(a)(1)-(4) and (7)-(10).
Dispatch sub-type	Unit type field in AEMO's Data Model (DISPATCHSUBTYPE) that, for voluntarily scheduled resources, will be able to take one of the two possible values: VSR or VSRBATTERY, which will identify VSRs exclusively made up of one or more non-scheduled market bidirectional units (VSRBATTERY, see also the term "battery only voluntarily scheduled resource") and VSRs of any other qualifying resource composition (VSR, see also the term "mixed voluntarily scheduled resource").
Dispatchable capacity	The maximum production or consumption of the <i>voluntarily scheduled resource</i> to which the voluntarily scheduled resource may be dispatched, as defined in NER Schedule 3.1.
DNSP	Distribution Network Service Provider
EMMS	Electricity market management system
FCAS	Frequency control ancillary services, identified by NER 3.11.2(a)
FRMP	Financially Responsible Market Participant
IPRR	National Electricity Amendment (Integrating price-responsive resources into the NEM) Rule 2024 No.24
MASS	Market Ancillary Services Specification
MW	Megawatt
MWh	Megawatt hour
NEMDE	National Electricity Market Dispatch Engine
NER	National Electricity Rules
NMI	National Metering Identifier
Mixed voluntarily scheduled resource	A <i>voluntarily scheduled resource</i> that is comprised of one or more qualifying resources that are classified as <i>non-market bidirectional units</i> that are <i>non-scheduled bidirectional units</i> . A mixed <i>voluntarily scheduled resource</i> could consist of any permutation of <i>qualifying resources</i> contemplated in NER 3.10A.1(a) including <i>market generating units</i> , <i>market connection points</i> that are <i>non-scheduled loads</i> , <i>small generating units</i> or <i>small bidirectional units</i> , the only exception being exclusively consisting of <i>non-scheduled market bidirectional units</i> (see the definition of a non-scheduled market bidirectional unit in this Glossary).
Non-scheduled market bidirectional unit	A <i>market bidirectional unit</i> that is a <i>non-scheduled bidirectional unit</i> .
Short term PASA	Short Term Projected Assessment of System Adequacy under NER 3.7.3
PMS	Portfolio Management System
Price-Responsive resources	Price-responsive resources refer to the wide range of residential, community, commercial and industrial energy resources and load that are not currently scheduled through the market dispatch process and do, or could, respond (individually or as part of aggregation) to market price signals. It includes but not limited to household CER such as solar PV, batteries, EVs, flexible hot water systems, pool pumps and industrial loads with components of controllable demand (for example smelters, foundries and manufacturing facilities).
PV	Photovoltaic
Regulation FCAS	Frequency control ancillary services, identified by NER 3.11.2(a)(5) and (6).
RERT	Reliability and emergency reserve trader
SCADA	Supervisory Control and Data Acquisition
Scale Range	The range of measurements for an Analogue Value that can be represented by a numeric value.
TNI	Transmission node identifier

TNSP	Transmission Network Service Provider
VSR zone	Refers to the <i>network</i> boundaries, on the <i>network</i> , within which the connection points of the <i>qualifying resources</i> in a <i>voluntarily scheduled resource</i> must be contained.
VSRP	<i>Voluntarily Scheduled Resource Provider</i>

Definition conventions

To assist with interpretation of the above acronyms and terms during the use of these Guidelines, the following convention has been used:

- (a) Unless otherwise specified, the term *voluntarily scheduled resource* refers to the aggregation of *qualifying resources* at the *dispatchable unit identifier*-level
 - (i) A *qualifying resource* is the individual, *NMI*-level resource that is nominated and aggregated to form a *voluntarily scheduled resource*.
- (b) Given that *inactive voluntarily scheduled resources* are treated as *scheduled resources*, subject to the exceptions outlined in NER 3.10A.2(f), requirements and obligations in the NER that apply to scheduled resources apply to both active *voluntarily scheduled resources* and *inactive voluntarily scheduled resources*. *Hibernated voluntarily scheduled resources* are not considered or treated as *scheduled resources*.

1.2.2. Interpretation

The following principles of interpretation apply to these Guidelines unless otherwise expressly indicated:

- (a) These Guidelines are subject to the principles of interpretation set out in Schedule 2 of the National Electricity Law.
- (b) References to time are references to Australian Eastern Standard Time.
- (c) A reference to a clause is a reference to a clause of the NER.
- (d) A reference to a section is a reference to a section of this Guideline.
- (e) A reference to a paragraph is a reference to a paragraph of this Guideline

1.3. Related documents

Title	Location
Application for registration as a Generator, Integrated Resource Provider or Market Customer.	https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/participate-in-the-market/registration
Application Guide for Nomination of a Voluntarily Scheduled Resource in the NEM	[Location pending finalisation of document]
Guide to Ancillary Services in the National Electricity Market	https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/system-operations/ancillary-services
Market ancillary services specification	https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/system-operations/ancillary-services/market-ancillary-services-specification-and-fcas-verification-tool
Frequency Contribution Factors Procedure	https://aemo.com.au/consultations/current-and-closed-consultations/frequency-contribution-factors-procedure
FCAS Model in NEMDE	https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/market-operations/policy-and-process-documentation
Pre-Dispatch Procedure (SO_OP_3704)	https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/system-operations/power-system-operation/power-system-operating-procedures
Dispatch procedure (SO_OP_3705)	https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/system-operations/power-system-operation/power-system-operating-procedures
Demand Side Participation Information Guidelines	https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/forecasting-approach/forecasting-and-planning-guidelines/demand-side-participation-information-guidelines
Power System Data Communications Standard	https://aemo.com.au/energy-systems/market-it-systems/electricity-system-guides/power-systems
Dispatch Data	Data communicated to AEMO to support the central dispatch process, as defined in the Power System Data Communications Standard.
Portfolio Management System User Guide	https://markets-portal-help.docs.public.aemo.com.au/Content/PortfolioManagementSystem/Portfolio_Management_System.htm?tocpath=Portfolio%20Management%20System%7C____0
Bidirectional unit price band bid validation	https://aemo.com.au/initiatives/major-programs/nem-reform-program/nem-reform-program-initiatives/integrating-energy-storage-systems-project/integrating-energy-storage-systems-participant-toolbox/bidirectional-unit-transition-and-cutover
Market settlement and transfer solutions (MSATS) Procedures	https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/market-operations/retail-and-metering/market-settlement-and-transfer-solutions-msats
Markets Portal Guide to User Rights Management	https://markets-portal-help.docs.public.aemo.com.au/Content/UserRightsManagement/URM.htm
VSR Aggregated Telemetry Check Policy	[Location pending finalisation of document]
VSR Zone Mapping Tool	[Location pending finalisation of tool]

2. Voluntarily scheduled resource nomination

2.1. Requirements of a qualifying resource, voluntarily scheduled resource and Voluntarily Scheduled Resource Provider

NER 3.10A.3(b)(1) requires AEMO to specify in the Guidelines requirements for nominating one or more *qualifying resources* as a *voluntarily scheduled resource* in accordance with NER 3.10A.1. Table 3 lists the requirements under the NER and that have been determined by AEMO for a *qualifying resource*, *voluntarily scheduled resource* and *Voluntarily Scheduled Resource Provider*.

- (a) A *Voluntarily Scheduled Resource Provider* must be registered as a *Generator*, *Integrated Resource Provider* or *Market Customer*.
- (b) The person registered as a *Generator*, *Integrated Resource Provider* or *Market Customer* will become a *Voluntarily Scheduled Resource Provider* through approval of the nomination of one or more *qualifying resources* under NER 3.10A.1 as a *voluntarily scheduled resource*.

2.1.1. Minimum threshold for a voluntarily scheduled resource

NER 3.10A.3(b)(5)(iii) requires AEMO to specify the minimum threshold for nameplate rating or combined nameplate rating of a *voluntarily scheduled resource*.

- (a) The minimum threshold for nameplate or combined *nameplate rating* of a *voluntarily scheduled resource* is 1 MW for *production* or *consumption* or both, depending on the dispatchable capacity¹ of that *voluntarily scheduled resource* that is outlined in Table 2.
- (b) The nameplate or combined nameplate rating of a *voluntarily scheduled resource* for *production* or *consumption* or both must be calculated as the net aggregate value in MW for all the *qualifying resources* in a *voluntarily scheduled resource* that can produce or consume or both.
- (c) The *nameplate rating* for a *qualifying resource* within a *voluntarily scheduled resource* must be determined by the *Voluntarily Scheduled Resource Provider* as the maximum *production* or *consumption* or both in kW at the *market connection point*, not just the price-responsive component.
 - (i) If a *qualifying resource* is at a *secondary settlement point*, the *nameplate rating* for *production* or *consumption* or both must correspond with the *nameplate rating* at that *secondary settlement point* and not at the *primary connection point*.
 - (ii) If a *qualifying resource* is at an on-market *child connection point* within an *embedded network*, the *nameplate rating* for *production* or *consumption* or both

¹ The term “dispatchable capacity” is explained in the Glossary section of this document.

must correspond with the *nameplate rating* at that *child connection point* and not at the parent *connection point*.

The minimum threshold for *nameplate rating*, or combined *nameplate rating*, is distinct from the minimum bid size that applies to a *voluntarily scheduled resource*. Minimum bid size is set at the current system minimum of 1 MW for bidding.

- (d) To be nominated, a *voluntarily scheduled resource* must have a sufficient nameplate or combined *nameplate rating* to meet the 1 MW minimum bid size for *production* or *consumption* or both, as outlined in Table 2.
- (i) A *voluntarily scheduled resource* with dispatchable capacity in *production* only is expected to nominate a minimum 1 MW nameplate or combined *nameplate rating* for its *production* and a 0 MW *nameplate rating* for its *consumption*.
- (ii) A *voluntarily scheduled resource* with dispatchable capacity in *consumption* only is expected to nominate a minimum 1 MW nameplate or combined *nameplate rating* for its *consumption* and a 0 MW *nameplate rating* for its *production*.
- (iii) A *voluntarily scheduled resource* with dispatchable capacity in both *production* and *consumption* is expected to nominate a minimum 1 MW nameplate or combined *nameplate rating* for both its *production* and its *consumption*.
- (e) The *voluntarily scheduled resource* will be represented in AEMO's systems according to the values provided in Table 2.

Table 2 Minimum threshold requirements eligible according to the *voluntarily scheduled resource* dispatch sub-type

Dispatchable capacity	Minimum production nameplate or combined <i>nameplate rating</i> (MW)	Minimum consumption nameplate or combined <i>nameplate rating</i> (MW)
Production only	≥ 1	0
Consumption only	0	≥ 1
Production and consumption	≥ 1	≥ 1

Table 3 Description of the requirements for a qualifying resource, voluntarily scheduled resource, and Voluntarily Scheduled Resource Provider/financially responsible Market Participant

Component or proponent	NER	Description	Requirements
Qualifying resource(s)	3.10A.1(a)	Individual <i>NMI</i> or <i>NMIs</i> at a <i>market connection point</i>	<ul style="list-style-type: none"> • <i>Market connection point</i> meets the <i>metering installation</i> requirements in section 9 • <i>Qualifying resource</i> is not already: <ul style="list-style-type: none"> – nominated by another <i>Voluntarily Scheduled Resource Provider</i> – nominated by a <i>Demand Response Service Provider</i> to be a <i>qualifying load</i> for a <i>wholesale demand response unit</i> – nominated by another person for the provision of <i>market ancillary services</i> – entered into a reliability and emergency reserve trader (RERT) reserve contract with AEMO • Meets relevant standards outlined in section 5.1.1 • Comply with individual distribution connection agreements, such as set up with emergency backstop capabilities where required (responsibility of the <i>Voluntarily Scheduled Resource Provider</i>) • <i>Qualifying resource</i> is not located in a <i>stand-alone power system</i> or a <i>regulated SAPS</i>
	3.10A.3(b)	<p><i>Qualifying resource</i> means:</p> <ul style="list-style-type: none"> • a <i>market generating unit</i> that is a <i>non-scheduled generating unit</i> • a <i>market bidirectional unit</i> that is a <i>non-scheduled bidirectional unit</i> • a <i>market connection point</i> that is <i>non-scheduled load</i> • one or more <i>small generating units</i> or <i>small bidirectional units</i> (or any combination) at a <i>small resource connection point</i> classified as a <i>market connection point</i> in accordance with clause 2.2.8 	
Voluntarily scheduled resource	3.8.3	Nomination of one or more <i>qualifying resources</i> into a single <i>dispatchable unit identifier</i> within the same VSR zone	<ul style="list-style-type: none"> • Be in the same VSR zone • Meet the operational requirements for telemetry and communications in section 5.4 and in section 5.1.3 • Minimum nameplate or combined <i>nameplate rating</i> of 1 MW for either <i>production</i> or <i>consumption</i> or both (section 2.1.1) • Can only be scheduled and <i>dispatched</i> via the relevant <i>Voluntarily Scheduled Resource Provider</i> and not across multiple aggregated service providers • Poses no threat to maintaining <i>power system security</i>
	3.10A.1(b)		
	3.10A.1(c)		
	3.10A.3(b)(1)		
	3.10A.3(b)(2)		
	3.10A.3(b)(5)		

Component or proponent	NER	Description	Requirements
Voluntarily Scheduled Resource Provider	3.10A.1	<ul style="list-style-type: none"> A Market Participant whose <i>qualifying resource(s)</i> have been approved for nomination as a <i>voluntarily scheduled resource</i> May participate in the <i>VSR incentive mechanism</i> 	<ul style="list-style-type: none"> Must be registered as a <i>Generator, Integrated Resource Provider</i> or <i>Market Customer</i> Responsible for ensuring each <i>qualifying resource</i> and the <i>voluntarily scheduled resource</i> complies with the requirements in the NER and these Guidelines
Financially responsible Market Participant	3.10A.1 3.10A.3(b)(3)	In respect of the <i>market connection point(s)</i> (of the <i>qualifying resource(s)</i> nominated in a <i>voluntarily scheduled resource</i>	<ul style="list-style-type: none"> The <i>Voluntarily Scheduled Resource Provider</i> must be the <i>financially responsible Market Participant</i>

2.2. Application process to nominate a qualifying resource as a voluntarily scheduled resource

A *Generator, Integrated Resource Provider* or *Market Customer* may apply to AEMO to nominate one or more *qualifying resources* as a *voluntarily scheduled resource*.

The *qualifying resource(s)* are not required to be nominated individually with AEMO prior to their nomination as part of the aggregation of *qualifying resource(s)* into a *voluntarily scheduled resource*.

The nomination process for a *voluntarily scheduled resource* includes:

- (a) The applicant will submit an application to nominate a *qualifying resource*, or aggregation of *qualifying resources*, as a *voluntarily scheduled resource* using AEMO's Portfolio Management System.
- (b) An applicant that is the *financially responsible Market Participant* for all *qualifying resources* of an existing *ancillary service unit* may apply to nominate the unit as a *voluntarily scheduled resource* to provide *energy services*.
 - (i) The classification of an existing *ancillary service unit* that is nominated to provide both *market ancillary services* and *energy services* will be transferred to the *dispatchable unit identifier* that will be created through its nomination, and under which it will be providing both services.
 - (ii) The classification of a single *non-scheduled market generating unit*, or *non-scheduled market bidirectional unit* or *non-scheduled load* that is classified as an *ancillary service unit* that is nominated to provide both *market ancillary services* and *energy services* will be transferred to the *dispatchable unit identifier* that will be created through its nomination, and under which it will be providing both services.
 - (iii) After the initial nomination of a *voluntarily scheduled resource* that is also classified as an *ancillary service unit*, the *Voluntarily Scheduled Resource Provider* may only nominate *qualifying resource(s)* to that *voluntarily scheduled resource* that are capable of providing both *energy* and *market ancillary services*.
 - (A) If a *Voluntarily Scheduled Resource Provider* chooses to nominate a *qualifying resource* that is not capable of providing *market ancillary services* to an existing *voluntarily scheduled resource*, that *voluntarily scheduled resource* will only be able to provide *energy services*.
- (c) In accordance with NER 3.10A.1(c) and these Guidelines, applications must include the information outlined in Table 4.
- (d) In respect of a *voluntarily scheduled resource*, the *Voluntarily Scheduled Resource Provider* may:

- (i) Provide written consent under section 10.2.1 for the relevant *Distribution Network Service Provider(s)* to receive pre-dispatch information for the *voluntarily scheduled resource*.
 - (ii) Opt-in to AEMO automatically denominating a *qualifying resource* from their *voluntarily scheduled resource* if the resource ceases to be a *qualifying resource* in accordance with NER 3.10A.1(m)(2).
- (e) AEMO must, within 5 business days of receiving a nomination application for a *voluntarily scheduled resource*, advise the applicant of any further information or clarification which is required in support of its application.
 - (i) If the further information or clarification requested is not provided to AEMO's satisfaction within 15 business days of the request, then AEMO may deem the applicant to have withdrawn the application.
- (f) AEMO will approve applications for nomination of one or more *qualifying resources* as a *voluntarily scheduled resource* if it is reasonably satisfied that it meets the requirements in Table 3 and under NER 3.10A.1(f) and in respect of aggregation in NER 3.8.3, including that AEMO is reasonably satisfied that:
 - (i) The request is made in respect of one or more *qualifying resources*.
 - (ii) The applicant has submitted data in accordance with Table 4.
 - (iii) The applicant passes the technical capability assessment outlined in section 5.1.2, including tests that the *voluntarily scheduled resource* can submit bids, receive dispatch instructions and meet dispatch targets.
 - (iv) The applicant has adequate communications and telemetry in place to support the exchange of required data under these Guidelines and the Power System Data Communications Standard for the proposed *voluntarily scheduled resource*.
- (g) AEMO will not approve applications for nomination of one or more *qualifying resource(s)* as a *voluntarily scheduled resource* if it determines that:
 - (i) AEMO must represent the *voluntarily scheduled resource* as two or more dispatchable units in constraints used in *central dispatch* in order to maintain *power system security*.
- (h) AEMO will not give approval to a person under paragraph 2.2(g) in respect of a *qualifying resource* that is nominated as a *voluntarily scheduled resource* by a different person.

Table 4 Information requirements for nomination applications of a voluntarily scheduled resource

INFORMATION	DETERMINED BY
Qualifying resource information	
The <i>NMI</i> and <i>market connection point</i> associated with each <i>qualifying resource</i>	Table 3, section 2.1
Validation that the <i>qualifying resource(s)</i> meet the requirements in Table 3	Table 3, section 2.1
<i>Nameplate rating</i> for the <i>qualifying resource</i> for <i>production</i> or <i>consumption</i> or both	kW (produced), kW (consumed) <ul style="list-style-type: none"> Determined according to paragraph 2.1.1(b)
Maximum dispatchable capacity for the <i>qualifying resource</i> for <i>production</i> or <i>consumption</i> or both	kW (produced), kW (consumed) <ul style="list-style-type: none"> Maximum <i>production</i> or <i>consumption</i> associated with the <i>market connection point</i> of the <i>qualifying resource</i> that can be dispatched Where relevant, includes non-price-responsive components behind the <i>market connection point</i>
Primary and Secondary Technology Type	Options listed in Application Guide for Nomination of a Voluntarily Scheduled Resource in the NEM
Primary and Secondary Fuel Type	Options listed in Application Guide for Nomination of a Voluntarily Scheduled Resource in the NEM
For each device under control by the <i>Voluntarily Scheduled Resource Provider</i> for a <i>qualifying resource</i> : <ul style="list-style-type: none"> NMI Device type <i>Nameplate rating</i> for <i>production</i> or <i>consumption</i> or both Energy storage capacity 	<ul style="list-style-type: none"> The NMI the device is linked to The classification that best suits the device based on the available categories kW: AC mandatory for all devices, DC optional for solar PV kWh, or 0 for generation only devices such as solar PV and load only devices
Voluntarily scheduled resource information	
The <i>nameplate rating</i> or combined <i>nameplate rating</i> for the <i>voluntarily scheduled resource</i> for <i>production</i> or <i>consumption</i> or both	MW (produced), MW (consumed) <ul style="list-style-type: none"> Determined according to section 2.1.1
Validation that the <i>voluntarily scheduled resource</i> meets the requirements in Table 3	Table 3, section 2.1
Declaration that none of the <i>qualifying resource(s)</i> in a <i>voluntarily scheduled resource</i> are in an existing <i>reliability and emergency reserve trader (RERT) reserve contract</i> with AEMO	Declaration provided by the <i>Voluntarily Scheduled Resource Provider</i>
Status of the <i>voluntarily scheduled resource</i> to apply from its effective date	May be an active <i>voluntarily scheduled resource</i> or <i>inactive voluntarily scheduled resource</i> , but not a <i>hibernated voluntarily scheduled resource</i> .
Battery only <i>voluntarily scheduled resource</i> : Minimum and Maximum State of Charge for the <i>voluntarily scheduled resource</i>	MWh The minimum and maximum allowable state of charge (SOC) for the unit or aggregated unit
Battery only <i>voluntarily scheduled resource</i> : Storage Import and Export Efficiency Factor	Efficiency factor for energy imported or exported from storage, calculated as weighted average factors for the units in VSR
NER Schedule 3.1 bid validation data:	
Maximum <i>production</i> of the <i>voluntarily scheduled resource</i> , to which the <i>voluntarily scheduled resource</i> may be dispatched	MW (produced) <ul style="list-style-type: none"> Maximum <i>production</i> associated with each <i>market connection point</i> of the <i>qualifying resources</i> within a <i>voluntarily scheduled resource</i> that can be dispatched (used to validate dispatch bids) Where relevant, includes non-price-responsive components behind the <i>market connection point</i> of <i>qualifying resource(s)</i>
Maximum <i>consumption</i> of the <i>voluntarily scheduled resource</i> , to which the <i>voluntarily scheduled resource</i> may be dispatched	MW (consumed)

INFORMATION	DETERMINED BY
	<ul style="list-style-type: none"> Maximum <i>consumption</i> associated with each <i>market connection point</i> of the <i>qualifying resources</i> within a <i>voluntarily scheduled resource</i> that can be dispatched (used to validate dispatch bids) Where relevant, includes non-price-responsive components behind the <i>market connection point of qualifying resource(s)</i>
Maximum ramp rate of the <i>voluntarily scheduled resource</i>	MW/minute <ul style="list-style-type: none"> <i>Voluntarily scheduled resource</i> must meet requirements of AEMO's Dispatch procedure under Section 2.8 Ramp rates in energy dispatch instructions.
Maximum storage capacity of the <i>voluntarily scheduled resource</i>	MWh <ul style="list-style-type: none"> Where relevant, the maximum storage capacity of all battery energy storage systems (BESS) or other storage systems within the <i>voluntarily scheduled resource</i> If the voluntarily scheduled resource contains no storage capacity, value is to be submitted as 0

2.3. Effect of approval for nomination as a voluntarily scheduled resource

The approval of the nomination of a *voluntarily scheduled resource* will be for one of the following categories, determined by the *qualifying resource* composition nominated for the *voluntarily scheduled resource*:

- battery only *voluntarily scheduled resource* (VSRBATTERY *dispatch* sub-type)
- mixed *voluntarily scheduled resource*²(VSR *dispatch* sub-type)

The nomination of a *voluntarily scheduled resource* provides approval for the provision of *energy services* only.

- Once a *voluntarily scheduled resource* has been approved, the *Voluntarily Scheduled Resource Provider* may then apply in a separate process to classify *plant* connected at a *market connection point* as an *ancillary service unit*, including Contingency or Regulation Frequency Control Ancillary Services (FCAS).
- For application and approval to provide *market ancillary services*, the *voluntarily scheduled resource* must meet the Market Ancillary Services Specification (MASS)³ to be an *ancillary service unit*.

2.3.1. Responsibilities of a Voluntarily Scheduled Resource Provider following the approval of a voluntarily scheduled resource

Following approval for a *voluntarily scheduled resource*, a *Voluntarily Scheduled Resource Provider* will be able to and be responsible for managing their *voluntarily scheduled resource*

² The terms "battery only *voluntarily scheduled resource*" and "mixed *voluntarily scheduled resource*" are both explained in the Glossary section of this document.

³ See: <https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/system-operations/ancillary-services/market-ancillary-services-specification-and-fcas-verification-tool>

portfolio, including the removal or addition of *qualifying resources* in the *voluntarily scheduled resource* through the process outlined in section 3.

Further to the above portfolio management responsibilities:

- (a) A *Voluntarily Scheduled Resource Provider* is required under NER 3.13.3(j) to participate in AEMO's annual review of NER Schedule 3.1 bid validation data, submitted as part of the nomination of the *voluntarily scheduled resource*.
 - (i) During the annual review of NER Schedule 3.1 bid validation data, a *Voluntarily Scheduled Resource Provider* is required to provide updated information on each device under their control for each of the *qualifying resources* in a *voluntarily scheduled resource*.
- (b) A *Voluntarily Scheduled Resource Provider* retains its existing registration as a *Generator, Integrated Resource Provider* or *Market Customer*, and any existing obligations under the NER for the connection points in their *voluntarily scheduled resource* continue to apply.
- (c) Approval of a *qualifying resource* as a *voluntarily scheduled resource* does not affect the classification of that resource as a *market generating unit, market bidirectional unit* or *market connection point* (as applicable).
- (d) A *qualifying resource* in a *voluntarily scheduled resource* will only be able to form part of an *unscheduled reserve contract* when that *voluntarily scheduled resource* is a *hibernated voluntarily scheduled resource*.

2.3.2. Ongoing requirements for voluntarily scheduled resources

Following approval to nominate one or more *qualifying resources* as a *voluntarily scheduled resource*, the *Voluntarily Scheduled Resource Provider* must ensure ongoing compliance with the requirements in Table 3.

AEMO will perform daily monitoring of *qualifying resources* within a *voluntarily scheduled resource* to check that the resources forming part of a *voluntarily scheduled resource* continue to be a *qualifying resource*.

- (a) Under NER 3.10A.1(m)(1), AEMO will denominate a *qualifying resource* from a *voluntarily scheduled resource* if the *Voluntarily Scheduled Resource Provider* ceases to be the *financially responsible Market Participant* for that *qualifying resource*.
- (b) Under NER 3.10A.1(m)(2):
 - (i) If a *Voluntarily Scheduled Resource Provider* has opted-in under paragraph 2.2(d)(ii) (automatic denomination), AEMO will denominate a *qualifying resource* from a *voluntarily scheduled resource* upon becoming aware that a resource forming part of a *voluntarily scheduled resource* ceases to be a *qualifying resource*.

- (ii) If a *Voluntarily Scheduled Resource Provider* has not opted-in under paragraph 2.2(d)(ii) (automatic denomination) during nomination of the *voluntarily scheduled resource*, the *Voluntarily Scheduled Resource Provider* must notify AEMO as soon as practicable, and in any event, no later than 10 business days after becoming aware that a resource forming part of a voluntarily scheduled resource ceases to be a *qualifying resource*. Where a *Voluntarily Scheduled Resource Provider* fails to provide such notice to AEMO under NER 3.10A.1(m)(2), AEMO may denominate the *qualifying resource*.
- (c) If AEMO denominates a *qualifying resource* under paragraph 2.3.2(a) or (b), AEMO will notify the *Voluntarily Scheduled Resource Provider* that the *qualifying resource* has been denominated.
- (d) If AEMO determines that a *qualifying resource* in a *voluntarily scheduled resource* was not eligible for nomination because it did not meet the capabilities listed under section 5.1.1 at the time of nomination, AEMO may require the *Voluntarily Scheduled Resource Provider* to rectify such non-compliance within a reasonable timeframe. Where a *Voluntarily Scheduled Resource Provider* fails to rectify such non-compliance, AEMO may denominate the *voluntarily scheduled resource*.

2.4. Disaggregation of voluntarily scheduled resources

NER 3.10A.3(b)(2) states that AEMO must specify the requirements and process for aggregation of *voluntarily scheduled resources* in accordance with NER 3.8.3, including the circumstances in which AEMO may request *Voluntarily Scheduled Resource Providers* that have aggregated *voluntarily scheduled resources* to:

- declare individual *qualifying resource* availability and operating status to AEMO pursuant to NER 3.8.3(f1); or
- disaggregate pursuant to NER 3.8.3(b)(6).

2.4.1. Declaring individual *qualifying resource* availability and operating status

AEMO may request *Voluntarily Scheduled Resource Providers* that have aggregated *qualifying resources* to declare individual *qualifying resource* availability and operating status to AEMO under the following circumstances:

- (a) AEMO determines that it may need to represent the *voluntarily scheduled resource* within the aggregation as two or more dispatchable units in constraints used in *central dispatch* in order to maintain *power system security*.
- (b) AEMO detects ongoing non-conformance with the *dispatch* conformance criteria for a *voluntarily scheduled resource*, and the non-conformance can be reasonably attributed to a *qualifying resource* within the *voluntarily scheduled resource*.

In the event of such a request, AEMO will:

- (c) Provide an explanation to the *Voluntarily Scheduled Resource Provider* for the reason for the request in relation to AEMO's concerns on the impact of the *voluntarily scheduled resource* on *power system security*.
- (d) Work with the *Voluntarily Scheduled Resource Provider* to address the concerns.

2.4.2. Disaggregating qualifying resources

- (a) AEMO may require a *Voluntarily Scheduled Resource Provider* that has aggregated *qualifying resources* to disaggregate those *qualifying resources* into two or more *voluntarily scheduled resources*.
- (b) Disaggregation may be required by AEMO for the circumstances outlined in paragraphs 2.4.1(a) and (b) or as the outcome of AEMO's request in section 2.4.1 for individual *qualifying resource* availability and operating status.

If AEMO requires disaggregation:

- (c) AEMO will work with the *Voluntarily Scheduled Resource Provider* to address the concerns.
- (d) AEMO may:
 - (i) Require the *Voluntarily Scheduled Resource Provider* to cease the nomination of that *voluntarily scheduled resource* and subsequently submit the nomination of two or more *voluntarily scheduled resources*.
 - (ii) Require the *Voluntarily Scheduled Resource Provider* move one or more *qualifying resources* from that *voluntarily scheduled resource* to another *voluntarily scheduled resource*.

3. Portfolio management

3.1. Portfolio management requirements for a *Voluntarily Scheduled Resource Provider*

Information on how AEMO will manage *voluntarily scheduled resource* portfolio updates, and AEMO's expectations of a *Voluntarily Scheduled Resource Provider*, are outlined in the Portfolio Management System guides. This includes:

- (a) The establishment and maintenance of *voluntarily scheduled resource* aggregations and portfolios, including:
 - (i) Nomination and ceasing the nomination of a *voluntarily scheduled resource*
 - (ii) Addition and removal of *qualifying resources*

- (iii) Implementing and managing *voluntarily scheduled resource* participation status, including becoming an *inactive voluntarily scheduled resource* or a *hibernated voluntarily scheduled resource*
- (iv) Regular updates to standing data, including the backstop capability status of a *voluntarily scheduled resource*.
- (b) Updates to AEMO validation processes to manage *voluntarily scheduled resources*, including *voluntarily scheduled resource* management within VSR zones.
- (c) A *Voluntarily Scheduled Resource Provider* will be responsible for ensuring that they utilise the Portfolio Management System in accordance with the Portfolio Management System User Guide in relation to their *voluntarily scheduled resource*.

3.2. Portfolio updates

3.2.1. Application process to add or remove *qualifying resources* from a *voluntarily scheduled resource*

- (a) A *Voluntarily Scheduled Resource Provider* may apply to add one or more *qualifying resources* to its *voluntarily scheduled resource* by submitting the relevant nomination request within AEMO's Portfolio Management System.
- (b) A *Voluntarily Scheduled Resource Provider* may apply to remove one or more *qualifying resources* from its *voluntarily scheduled resource* by submitting the relevant denomination request within AEMO's Portfolio Management System.
- (c) Within 5 business days of receiving an application under paragraph 3.2.1(a) or (b), AEMO will review the application and advise the *Voluntarily Scheduled Resource Provider*:
 - (i) of any further information or clarification which is required in support of its application, in AEMO's reasonable opinion;
 - (ii) if the application is considered a significant portfolio change under paragraph 5.3(a), in which case the amended *voluntarily scheduled resource* must undertake a capability re-assessment; or
 - (iii) that AEMO considers the application to be complete.
- (d) If AEMO requests a *Voluntarily Scheduled Resource Provider* to provide further information or clarification under paragraph 3.2.1(c), the *Voluntarily Scheduled Resource Provider* should provide this information as soon as practicable, in the form and manner requested by AEMO.
 - (i) If the further information or clarification requested pursuant to paragraph 3.2.1(c) is not provided to AEMO's satisfaction within 15 business days of the

request, then the *Voluntarily Scheduled Resource Provider* may be deemed to have withdrawn the application.

3.2.2. Addition or removal of *qualifying resources* that impacts the minimum threshold of a *voluntarily scheduled resource*

The removal of one or more *qualifying resources* from a *voluntarily scheduled resource* by a *Voluntarily Scheduled Resource Provider* or due to churn under section 2.3.2 may result in the *voluntarily scheduled resource* dropping below the minimum threshold specified in section 2.1.1.

AEMO will perform daily monitoring of a *voluntarily scheduled resource* to check that it maintains the minimum threshold.

As the minimum threshold is set to align with the minimum bid size, required to meet a 1 MW bid for *production* or *consumption* or both under the requirements in Table 2, a *voluntarily scheduled resource* that drops below the minimum threshold would no longer be able to conform to a non-zero *dispatch* bid provided for an active *voluntarily scheduled resource*.

In the case of churn resulting in an active *voluntarily scheduled resource* or *inactive voluntarily scheduled resource* dropping below the minimum threshold:

- (a) The status of the *voluntarily scheduled resource* will be updated to inactive status, if not already an *inactive voluntarily scheduled resource*.
- (b) The *inactive voluntarily scheduled resource* will be granted a seven *trading days* grace period, after which the *inactive voluntarily scheduled resource* must have re-met the minimum threshold specified in section 2.1.1 by submitting an application under section 3.2.1.
 - (i) The grace period will commence from the *trading day* following the *trading day* where it was detected that the *voluntarily scheduled resource* has dropped below the minimum threshold.
- (c) Once the *inactive voluntarily scheduled resource* re-meets the minimum threshold, the *Voluntarily Scheduled Resource Provider* may submit a notice under section 6.4 to change the status of its *inactive voluntarily scheduled resource* to active or hibernated.
- (d) If the *inactive voluntarily scheduled resource* does not re-meet the minimum threshold within the grace period, the *inactive voluntarily scheduled resource* will be forced to hibernate.
 - (i) If a *Voluntarily Scheduled Resource Provider* has submitted an application to nominate one or more *qualifying resources* during the grace period under paragraph 3.2.1(a), the *voluntarily scheduled resource* will remain inactive until the completion of that application under paragraph 3.2.1(c).

- (e) A *hibernated voluntarily scheduled resource* that drops below the minimum threshold will be required to re-meet the minimum threshold upon resumption or before it reaches the maximum hibernation period otherwise the *hibernated voluntarily scheduled resource* will cease to be nominated as a *voluntarily scheduled resource* under paragraph 6.2(j)(i).

3.2.3. Addition or removal of *qualifying resources* that impacts the frequency of aggregated telemetry data threshold of a *voluntarily scheduled resource*

The addition or removal of one or more *qualifying resources* to a *voluntarily scheduled resource* by a *Voluntarily Scheduled Resource Provider* may result in the *voluntarily scheduled resource* exceeding or dropping below the threshold related to the frequency requirement of aggregated telemetry data under section 5.4.1.

- (a) The *Voluntarily Scheduled Resource Provider* must work with AEMO to ensure it complies with the Power System Data Communication Standard when exceeding the threshold.
 - (i) Compliance is required either before or at the nomination of additional *qualifying resources* into the *voluntarily scheduled resource* that would see it exceed the threshold.
 - (ii) AEMO will not approve an application under section 3.2.1 that causes a *voluntarily scheduled resource* to exceed the threshold if the *Voluntarily Scheduled Resource Provider* is not able to prove compliance with the Power System Data Communication Standard.
- (b) The *Voluntarily Scheduled Resource Provider* may work with AEMO if it elects to change the frequency of the aggregated telemetry data provided for its *voluntarily scheduled resource* if the *voluntarily scheduled resource* drops below the threshold as a result of an application submitted under section 3.2.1.

3.2.4. Addition or removal of *qualifying resources* that impacts the category (dispatch sub-type) of a *voluntarily scheduled resource*

- (a) For a battery only *voluntarily scheduled resource*, the *Voluntarily Scheduled Resource Provider* shall only apply to add one or more *qualifying resources* that are:
 - (i) battery only *non-scheduled market bidirectional units*, and
 - (ii) capable of providing state of charge information
- (b) The following conditions will apply to applications to remove one or more *qualifying resources*, or due to the denomination of one or more *qualifying resources* under section 2.3.2, from a mixed *voluntarily scheduled resource* that will cause that *voluntarily scheduled resource* to become a battery only *voluntarily scheduled resource*:
 - (i) The *Voluntarily Scheduled Resource Provider* must update the Schedule 3.1 information for that *voluntarily scheduled resource*.

- (ii) Once the *Voluntarily Scheduled Resource Provider* provides the updated Schedule 3.1 information, the *voluntarily scheduled resource* will be subject to paragraph 7.2(c) and the restrictions imposed by paragraph 3.2.4(a).
- (c) Under paragraph 3.2.4(b), *AEMO* will notify the *Voluntarily Scheduled Resource Provider* to remind them of the conditions that will apply either during the relevant application to remove or after the denomination of one or more *qualifying resources* under section 2.3.2.

4. Determining VSR zones and loss factors

NER 3.10A.3(c)(1) requires *AEMO* to specify the methodology it has used to determine zones in which *voluntarily scheduled resources* participate in *central dispatch* as well as the *loss factor* that is to apply in each zone for the purpose of NER 3.8.6(h).

4.1. AEMO's methodology for determining loss factors

- (a) All *voluntarily scheduled resources*, independent of VSR zone, will be allocated a *loss factor* of one.
- (b) *Qualifying resources* within a *voluntarily scheduled resource* will be settled under existing retail settlement processes, which account for the relevant *distribution loss factor* and transmission loss factor for each transmission node identifier (TNI) the *market connection point* for the *qualifying resource* is under.

4.2. AEMO's methodology for determining zones

- (a) When determining its methodology, *AEMO* uses the factors outlined in Table 5 to assess the suitability of zones.

Table 5 Factors to assess the suitability of zone classifications

Factor	Explanation
Size and ease of participation	Larger zones will, generally, contain more <i>qualifying resources</i> and therefore be more likely to support the development and growth of <i>voluntarily scheduled resources</i> .
Transmission system security	Zones must be set in a way that supports <i>AEMO's</i> effective management of <i>power system security</i> at the transmission level.
Load forecasting	Zones must be set in a way that allows <i>voluntarily scheduled resources</i> to be effectively integrated into the load forecasting process.
Balance voluntarily scheduled resource risk to system security over time	Consider size of impact, including the expected <i>voluntarily scheduled resource</i> growth rate, and therefore risk that <i>voluntarily scheduled resources</i> will have on <i>power system security</i> .
Stability	Changes to VSR zone boundaries will be potentially highly disruptive to <i>voluntarily scheduled resource</i> operations and development, and therefore should be minimised.

Factor	Explanation
Be consistent with future backstop arrangements and related activities	Ensure VSR zones are compatible and support backstop arrangements.

(b) Based on the factors for assessing the suitability of zone classification identified in Table 5 AEMO will use the congestion modelling zones as the basis for VSR zones, however, has amalgamated a number of zones in order to better support participation.

(c) The 13 VSR zones to be used are shown in Table 6.

Table 6 VSR zones and their constituent transmission congestion modelling zones

Number	VSR zone	Code	Constituent congestion modelling zones
Queensland (QLD)			
1	Q_CENTRAL	QC	Central Queensland
2	Q_NTH + Q_FARNORTH	QN	North Queensland Far North Queensland
3	Q_SOUTHWEST + Q_SOUTHEAST	QS	South West Queensland South East Queensland
New South Wales (NSW) and Australian Capital Territory (ACT)			
4	N_NORTH	NN	Northern NSW
5	N_SWNSW + N_CANBERRA	NS	South West NSW Remaining Southern NSW + Canberra
6	N_SYDNEY	NC	Sydney Metropolitan
7	N_CENWEST	NW	NSW Central West
Victoria (VIC)			
8	V_MELBOURNE	VM	Melbourne Metropolitan
9	V_STATEGRID	VS	Victorian state grid
South Australia (SA)			
10	S_ADELAIDE + S_NORTH + S_RIVERLAND	SN	Adelaide Metropolitan Remaining part of SA Riverland
11	S_SOUTHEAST	SE	South East SA
Tasmania (TAS)			

Number	VSR zone	Code	Constituent congestion modelling zones
12	T_NORTH + T_WEST	TN	Tas North Tas West
13	T_SOUTH	TS	Tas South

4.3. Zonal aggregation requirements

4.3.1. Requirements and conditions for aggregating in a zone

NER 3.10A.3(c)(2) requires *AEMO* to specify the requirements and conditions on *Voluntarily Scheduled Resource Providers* for aggregating *qualifying resources* as *voluntarily scheduled resources* in accordance with the central dispatch aggregation guidelines (NER 3.8.3).

In addition to the requirement specified in NER 3.8.3 that all *qualifying resources* that form part of an aggregated *voluntarily scheduled resource* must be within the same zone, *AEMO* will not approve an application from a *Voluntarily Scheduled Resource Provider* to aggregate *qualifying resources* unless it is reasonably satisfied that:

- (a) The *qualifying resources* that form part of the aggregated *voluntarily scheduled resource* meet the requirements in Table 3.
- (b) The *voluntarily scheduled resource* meets the requirements in Table 3, including that the *voluntarily scheduled resource* poses no threat to maintaining power system security.

4.3.2. Processes for validating zone compliance

NER 3.10A.3(c)(3) requires that *AEMO* specify guidance for *Voluntarily Scheduled Resource Providers* on processes for the aggregation of *voluntarily scheduled resources* into the zones determined under NER 3.10A.3(c)(1).

- (a) Prior to nomination, *Voluntarily Scheduled Resource Providers* will have access within *AEMO*'s VSR Zone Mapping Tool to information on the VSR zone that a TNI for a *NMI* related to the *market connection point* for a *qualifying resource* is *connected* within.
 - (i) Only TNIs for *connection points* that are electrically *connected* to the *national grid* will be allocated to a VSR zone under the exclusion in Table 3 that a *qualifying resource* is not located in a *stand-alone power system* or a *regulated SAPS*.
- (b) If a *Voluntarily Scheduled Resource Provider* elects to dispute the VSR zone that *AEMO*'s systems allocate to a *NMI* related to the *market connection point* for a *qualifying resource*:
 - (i) The applicant must advise *AEMO* of the VSR zone they consider the *NMI* related to the *market connection point* for a *qualifying resource* should be allocated to and provide *AEMO* with information and evidence to support their claim.

- (ii) *AEMO* may advise the applicant of any further information or clarification which is required in support of its claim.
- (iii) *AEMO* will advise the applicant if it approves the claim, or *AEMO* will provide the applicant with information explaining why *AEMO* considers the original VSR zone allocation was correct.
 - (A) If approved, the *NMI* related to the *market connection point* for a *qualifying resource* will be re-allocated to the agreed upon VSR zone.

NER 3.10A.3(c)(4) requires that *AEMO* specify its validation processes for zonal aggregations.

- (c) *AEMO* will produce and maintain a VSR Zone Mapping Tool to check the VSR zone that each *qualifying resource* is in during nomination and validate that all *qualifying resources* nominated into a *voluntarily scheduled resource* are in the same VSR zone.
 - (i) *AEMO* will update the VSR Zone Mapping Tool in the event of the creation of a new load TNI.

4.4. Review and changes to zones

Under NER 11.180.5, *AEMO* must not, prior to 23 May 2030, implement any change to a zone in which *voluntarily scheduled resources* are able to participate in *central dispatch*.

NER 3.10A.3(c)(5) requires *AEMO*, in the case of proposing to implement a change to any zone in which *voluntarily scheduled resources* participate in *central dispatch* (including implementing a new zone), to provide guidance for *Voluntarily Scheduled Resource Providers* on the processes and timing for the implementation of such change in zones, including the minimum lead time before such change would take effect.

In the event of a change to zones, *AEMO* will:

- (a) Provide a minimum lead time of 12 months.
- (b) Update the VSR Zone Mapping Tool, including:
 - (i) Provide an interim updated VSR Zone Mapping Tool with *AEMO*'s determination on any review of these Guidelines that results in a change to the VSR zones.
 - (ii) Publish a new VSR Zone Mapping Tool to align with the effective date of the change in VSR zones.

In the event of a creation of a load TNI that impacts the mapping to a VSR zone of a *qualifying resource* within an aggregated *voluntarily scheduled resource*:

- (c) A *Voluntarily Scheduled Resource Provider*, upon becoming aware of a mapping change, may apply to *AEMO* for a grace period of up to three months to facilitate the *Voluntarily Scheduled Resource Provider's* transfer of that *qualifying resource* to a different *voluntarily scheduled resource* that is in a different VSR zone.

5. Capability assessment

5.1. Initial capability assessment during nomination

5.1.1. Initial screening of capabilities of *qualifying resources* nominated as a *voluntarily scheduled resource*

NER 3.10A.3(b)(4) requires *AEMO* to provide a framework for testing the capabilities of *qualifying resources* prior to their request for nomination as a *voluntarily scheduled resource*.

During nomination, *AEMO* will conduct a pre-screening that will test the following capabilities of *qualifying resources* that have been nominated as a *voluntarily scheduled resource*:

- (a) Metering installation type meets requirements, as outlined in section 9.
- (b) *Voluntarily Scheduled Resource Provider* is the *financially responsible Market Participant* for the *qualifying resource*.
- (c) *Qualifying resource* is not already:
 - (i) Nominated by another *Voluntarily Scheduled Resource Provider*; or
 - (ii) Nominated by a DRSP to be a *qualifying load* for a *wholesale demand response unit*; or
 - (iii) Nominated by another person for the provision of *market ancillary services*; or
 - (iv) Entered into a *reserve contract* with *AEMO*.
- (d) *Voluntarily Scheduled Resource Provider* warrants that the *qualifying resource* meets relevant Australian standards and capabilities.
- (e) *Voluntarily Scheduled Resource Provider* warrants that the *qualifying resource* complies with its individual distribution connection agreement, such as set up with emergency backstop capabilities where required.
- (f) *AEMO* may verify the warranties from the *Voluntarily Scheduled Resource Provider* in paragraphs 5.1.1(d) and (e).

5.1.2. Technical capability assessment of nominated *voluntarily scheduled resource*

AEMO will conduct a technical capability assessment for the *voluntarily scheduled resource* upon its nomination, which will include:

- (a) Validation of the following information on the *voluntarily scheduled resource*:
 - (i) NER Schedule 3.1 Bid Validation data, including:
 - (A) *Voluntarily scheduled resource* name
 - (B) *Dispatchable unit identifier*

- (C) Maximum *production of the voluntarily scheduled resource*, to which the *voluntarily scheduled resource* may be dispatched MW (produced)
- (D) Maximum *consumption of the voluntarily scheduled resource*, to which the *voluntarily scheduled resource* may be dispatched MW (consumed)
- (E) Maximum ramp rate of the *voluntarily scheduled resource* MW/minute
- (F) Maximum storage capacity of the *voluntarily scheduled resource* MWh
- (ii) Minimum *nameplate rating*, or combined *nameplate rating*, of the *voluntarily scheduled resource*, to ensure the *voluntarily scheduled resource* is above the minimum threshold.
- (iii) Additional information for a battery only *voluntarily scheduled resource*:
 - (A) Minimum operational state of charge
 - (B) Maximum operational state of charge
 - (C) Storage import efficiency factor
 - (D) Storage export efficiency factor
- (b) Aggregated telemetry data test (section 5.4).
- (c) Systems Readiness assessment, where AEMO seeks evidence that a *dispatchable unit identifier* can use AEMO's Pre-Production systems once a *dispatchable unit identifier* has been configured to do so.
- (d) EMMS Pre-Production implementation.
- (e) Operational contacts for the *Voluntarily Scheduled Resource Provider*, to ensure 24/7 communication capability between AEMO operations and the *voluntarily scheduled resource*.

5.2. Aggregated telemetry check

AEMO will check periodically the accuracy of the aggregated telemetry data (defined as VSR Dispatch Data in Table 7) it receives for a *voluntarily scheduled resource* against aggregated revenue metering data for the *qualifying resource(s)* within the *voluntarily scheduled resource* according to the VSR Aggregated Telemetry Check Policy.

Accuracy will be considered under the requirement for the aggregated telemetry data to be a fair and accurate representation of the *voluntarily scheduled resource* dispatch.

During the aggregated telemetry check:

- (a) Revenue metering data for each *qualifying resource* within a *voluntarily scheduled resource* will be aggregated.
- (b) Aggregated revenue metering data will be checked against the aggregated telemetry data that AEMO received for the relevant *trading intervals*.

If the check identifies that the aggregated telemetry data received for the *voluntarily scheduled resource* was not a fair and accurate representation for the net *production* and *consumption* of the portfolio, AEMO:

- (c) Will share the outcome of the check with the *Voluntarily Scheduled Resource Provider*.
- (d) May re-assess the conformance rating of the *voluntarily scheduled resource* for the relevant *trading intervals* (for active *voluntarily scheduled resource*).
- (e) May consider impact on *voluntarily scheduled resource's* incentive payments under the *VSR incentive mechanism*.

5.3. Capability re-assessment due to significant portfolio changes

AEMO will conduct a capability re-assessment for a *voluntarily scheduled resource* in the following instances:

- (a) Material change in *voluntarily scheduled resource* characteristics, including:
 - (i) *Nameplate rating* or combined *nameplate rating* of the *voluntarily scheduled resource* changes by the larger of:
 - (A) 1 MW; or
 - (B) 20% of the total *nameplate rating* or combined *nameplate rating* of the *voluntarily scheduled resource*.
- (b) A *voluntarily scheduled resource* submits a resumption notice.
- (c) A *voluntarily scheduled resource* submits a reactivation notice after a deactivation period lasting more than 12 months.

A *voluntarily scheduled resource* experiencing performance issues or identified as non-conforming will be subject to AEMO's usual conformance process, as outlined in section 8.

The capability re-assessment will include:

- (d) Updated device level information, described in Table 4 of section 2.2.
- (e) Evidence that the *voluntarily scheduled resource* can use AEMO's pre-production systems, including that a *voluntarily scheduled resource* can submit a bid and receive dispatch instructions.
- (f) Evidence the *voluntarily scheduled resource* can provide aggregated telemetry data at the required frequency.

5.4. Aggregated telemetry and communications equipment requirements

5.4.1. Aggregated telemetry data requirements

AEMO is not specifying the telemetry data requirements for each *qualifying resource* within a *voluntarily scheduled resource*. The telemetry data requirements for a *qualifying resource* are at the discretion of the *Voluntarily Scheduled Resource Provider*.

Rather, for *voluntarily scheduled resources* participating in *energy only*, AEMO's expectations and requirements for telemetry data are for the *voluntarily scheduled resource* only, whereby:

- (a) AEMO expects to receive one stream of aggregated telemetry data for the *voluntarily scheduled resource*, defined as VSR Dispatch Data in Table 7, that is a fair and accurate representation of the *voluntarily scheduled resource* portfolio.
 - (i) AEMO will monitor the accuracy of the aggregated telemetry data it receives, as outlined in section 5.2.
- (b) VSR Dispatch Data is expected in the form of Supervisory Control and Data Acquisition (SCADA) provided via the *Network Service Provider* or through a direct SCADA-Lite connection compliant with the Power System Data Communications Standard.
- (c) For *voluntarily scheduled resources* above the following thresholds, or that opt to use AGC to transmit and receive VSR Dispatch Data,⁴ Table 7 outlines additional requirements for the sampling rate of the VSR Dispatch Data:
 - (i) *Voluntarily scheduled resource* with a *nameplate* or combined *nameplate rating* for *production* or *consumption* or both greater than or equal to 5 MW.
 - (ii) *Qualifying resources* located in an area of the *power system* where existing *scheduled resource(s)*:
 - (A) needs to be curtailed to maintain *power system security*; or
 - (B) is forecast to be curtailed as a result of committed investments and works, or other changes in the *power system*,
 for at least five hours per year.

Exemptions

- (d) NER 4.11.1(d)(1) gives AEMO discretion in approving remote monitoring equipment which, in AEMO's reasonable opinion, is adequate to enable AEMO to remotely monitor the performance of a *voluntarily scheduled resource*.

⁴ NER clause 4.11.1(g)

Table 7 Aggregated telemetry data requirements for a voluntarily scheduled resource

Category	<i>All voluntarily scheduled resources</i>	
VSR Dispatch Data	<ul style="list-style-type: none"> Aggregate net active power flow at market connection point(s) of all <i>qualifying resource(s)</i> in <i>voluntarily scheduled resource</i> No adjustment for distribution or transmission losses 	
Dimensional units	MW	
Resolution	Table 1 Power System Data Communications Standard Scale Range determined by minimum/maximum values under Validations	
Deadband (% of Scale Range)	Table 3 Power System Data Communications Standard	
Data accuracy tolerance	Table 3A Power System Data Communications Standard	
Quality flag	Data should be flagged as good quality if: <ul style="list-style-type: none"> The sum of the <i>production</i> or <i>consumption</i> associated with the <i>qualifying resource</i> meters for 75% or more of the maximum <i>production</i> or <i>consumption</i> of the <i>voluntarily scheduled resource</i> (to which the <i>voluntarily scheduled resource</i> may be dispatched) meets the definition of Good Quality in the Power System Data Communications Standard 	
Validations	<ul style="list-style-type: none"> Analogue Value with sign convention determined according to Section 2.2 of Power System Data Communications Standard Minimum/maximum values: maximum <i>production</i> or <i>consumption</i> of the <i>voluntarily scheduled resource</i>, to which the <i>voluntarily scheduled resource</i> may be dispatched + 20% 	
	<i>Voluntarily scheduled resources below thresholds</i>	<i>Voluntarily scheduled resources above thresholds, or transmitting and receiving VSR Dispatch Data via AGC</i>
Sampling rate and Age of Data⁵ for VSR Dispatch Data measurements from Intervening Facility⁶ to AEMO	Two measurement snapshots will be required for each five-minute <i>trading interval</i> (TI). Measurement snapshots must be received by the times specified below and Age of Data must be according to section 2.3.1 Power System Data Communications Standard: <ul style="list-style-type: none"> One in the middle, T-150s (2 minutes and 30 seconds into the TI) One at the end, T-5s (5 seconds before the end of the TI) where T marks the boundary/end of the current TI.	≤4 seconds, with Age of Data according to section 2.3.1 Power System Data Communications Standard.

5.4.2. Communications requirements for *Voluntarily Scheduled Resource Providers*

- (a) *Voluntarily Scheduled Resource Providers* are responsible for providing the VSR Dispatch Data specified in Table 7 for their *voluntarily scheduled resource*.
- (i) The *Voluntarily Scheduled Resource Provider* must treat the data specified in Table 7 as Dispatch Data for the purposes of the Power System Data Communications Standard.

⁵ Age of Data specifies end to end time for data transmission to AEMO, with the time interval measured from the instant the data first gets converted to digital form and includes any time within an Intervening Facility.

⁶ As defined in the Power System Data Communications Standard, a non-NSP Intervening Facility may collect data from *remote monitoring equipment* (either directly or via an aggregation facility) and relay that data to AEMO co-ordinating centres.

- (b) Where a *Voluntarily Scheduled Resource Provider* is required to provide data, the *Voluntarily Scheduled Resource Provider* must comply with the Power System Data Communications Standard when transmitting data to AEMO, unless otherwise stated in Table 7. This includes meeting the requirements specified in Table 7 regardless of the participation status of the *voluntarily scheduled resource*.
- (c) *Voluntarily Scheduled Resource Providers* must ensure they are formulating and submitting *dispatch bids* under the requirements outlined in section 5.1.2 and section 7, including the use of NEM EMMS bidding systems and the EMMS portal.
- (d) *Voluntarily Scheduled Resource Providers* are required to have 24-hour, seven days a week operational response capability for their active *voluntarily scheduled resource*, whereby the *Voluntarily Scheduled Resource Provider* is capable of receiving and actioning verbal and electronic *dispatch instructions* from AEMO immediately.
 - (i) The means by which the *Voluntarily Scheduled Resource Provider* follows AEMO's electronic or verbal *dispatch instructions* across the one or more *qualifying resources* within the *voluntarily scheduled resource* will be at the discretion of the *Voluntarily Scheduled Resource Provider*. Actioning of electronic or verbal *dispatch instructions* will be assessed for the *voluntarily scheduled resource*.
- (e) Where and if applicable, changes in circumstances in respect of *voluntarily scheduled resources* that could affect AEMO's management of *power system security*, including amendments to plant, are communicated to AEMO by the *Voluntarily Scheduled Resource Provider* for AEMO's awareness and management, including meeting the requirements of NER 4.8.1 and NER 4.8.2.

6. Deactivation and temporary hibernation

NER 3.10A.3(b)(7) requires AEMO to specify matters required by NER 3.10A.2 regarding the deactivation and temporary hibernation of *voluntarily scheduled resources*.

Voluntarily Scheduled Resource Providers are able to submit notices using AEMO's Portfolio Management System under the framework outlined in sections 6.2 and 6.3 to change the participation status of a *voluntarily scheduled resource* to be either active, inactive or hibernated.

- (a) *Voluntarily Scheduled Resource Providers* must follow the notice periods and notice information requirements in section 6.4 when providing notice to AEMO to change the participation status of a *voluntarily scheduled resource*.
 - (i) A *voluntarily scheduled resource* cannot change participation status within the *trading day*.

In the case of emergency situations, *Voluntarily Scheduled Resource Provider* must comply with NER 4.8.1 and NER 4.8.2 regarding the requirement to promptly advise AEMO at the time that the *Voluntarily Scheduled Resource Provider* becomes aware of any circumstance which

could be expected to adversely affect the secure operation of the power system or any equipment owned or under the control of the *Voluntarily Scheduled Resource Provider* or a *Network Service Provider*. As such:

- (b) The notice periods and notice information requirements for changes to a *voluntarily scheduled resource's* participation status, outlined in Table 9 and Table 10, do not apply during emergencies (which fall under requirements outlined in NER 4.8.1).

6.1. Deactivation

Under the requirement in paragraph 6(a)(i), an *inactive voluntarily scheduled resource* must remain inactive for a minimum of one *trading day* or multiples thereof. There is no maximum period for which a *voluntarily scheduled resource* can remain inactive, provided it continues to comply with the obligations for *voluntarily scheduled resources* under the NER, except to the extent its *inactive voluntarily scheduled resource* is exempted from the application of a provision of the NER under section 6.3.

- (a) A deactivation notice, as per NER 3.10A.2(c)(3), or reactivation notice will apply to each individual *qualifying resource* forming part of the aggregated *voluntarily scheduled resource*.
- (b) A separate notice is not required to specify a reactivation date. If a *Voluntarily Scheduled Resource Provider* includes a reactivation date in a deactivation notice, that date will be taken to be the reactivation notice under NER 3.10A.2(g) for the relevant deactivation period and the *voluntarily scheduled resource* will return to active status from that date.

An *inactive voluntarily scheduled resource* will continue to have that status until either:

- (c) The *Voluntarily Scheduled Resource Provider* submits a reactivation notice, in which case the *voluntarily scheduled resource* from the reactivation date specified will become an active *voluntarily scheduled resource*.
- (d) The *Voluntarily Scheduled Resource Provider* submits a hibernation notice, in which case the *voluntarily scheduled resource* from the date specified will become a *hibernated voluntarily scheduled resource*.
- (e) If a *Voluntarily Scheduled Resource Provider* includes a reactivation date in a deactivation notice, the *voluntarily scheduled resource* will return to active status from that date.
 - (i) A *Voluntarily Scheduled Resource Provider* may submit a deactivation notice to extend the deactivation period of the *voluntarily scheduled resource* if it has provided a reactivation date, in which case the *voluntarily scheduled resource* will remain inactive.

- (f) If an *inactive voluntarily scheduled resource* does not re-meet the minimum threshold defined in section 2.1.1 within the grace period defined under section 3.2.2 it will become a *hibernated voluntarily scheduled resource*.

6.2. Temporary hibernation

NER 3.10A.2(k)(1) sets a hibernation period of at least 30 days and a maximum period of 18 months.

- (a) A *Voluntarily Scheduled Resource Provider* may submit a hibernation notice to AEMO according to the process outlined in section 6.4 in respect of its active *voluntarily scheduled resource* or *inactive voluntarily scheduled resource*.
- (b) A hibernation notice, as per NER 3.10A.2(k)(4), will apply to each individual *qualifying resource* forming part of the aggregated *voluntarily scheduled resource*.
- (c) Under NER 3.10A.2(l)(2)(i), AEMO may impose conditions on the *hibernated voluntarily scheduled resource* for the duration of the hibernation period and the *Voluntarily Scheduled Resource Provider* must comply with those conditions. Circumstances in which AEMO will impose conditions include, but is not limited to, where it deems that the hibernation of the *voluntarily scheduled resource* could cause a threat to *power system security* in AEMO's reasonable opinion.
- (d) Additionally, AEMO will impose a condition that a *hibernated voluntarily scheduled resource* remains subject to NER 3.8.2(e).
- (e) For the duration of the hibernation period the *hibernated voluntarily scheduled resource* will no longer be classified as a *scheduled resource* and will not participate in *central dispatch* for energy.
- (f) Before commencing hibernation, a *Voluntarily Scheduled Resource Provider* must submit a bid, or bids, that marks the maximum availability of the *voluntarily scheduled resource* as zero (MaxAvail = 0) for Regulation FCAS and *energy* for the relevant hibernation period. Contingency FCAS bids must be submitted with EnablementMin, EnablementMax, LowBreakPoint and HighBreakPoint set to zero.
 - (i) A *Voluntarily Scheduled Resource Provider*, in relation to its hibernated *voluntarily scheduled resource*, must not submit an *energy* bid or bids that would change the maximum availability of the *voluntarily scheduled resource* to be non-zero for the relevant hibernation period.
 - (ii) A *Voluntarily Scheduled Resource Provider*, when submitting a hibernation notice in relation to its hibernated *voluntarily scheduled resource*, as a condition of its hibernation and in accordance with Table 10 section 6.4.2, must acknowledge that where it has failed to update its bids in relation to the *hibernated voluntarily scheduled resource* in accordance with paragraph 6.2(f), AEMO will set to zero:

- (A) any non-zero MaxAvail value for energy and regulation FCAS bids for this voluntarily scheduled resource that apply to *trading days* during the hibernation period.
- (B) the EnablementMin, EnablementMax, LowBreakPoint and HighBreakPoint values of any contingency FCAS bids for this voluntarily scheduled resource that apply to *trading days* during the hibernation period.

A *hibernated voluntarily scheduled resource* will continue to be hibernated until either:

- (g) The *Voluntarily Scheduled Resource Provider* submits a resumption notice to remove its status as hibernated and become an active *voluntarily scheduled resource*, in which case the *voluntarily scheduled resource* will become a *scheduled resource* again from the date specified.
 - (i) In relation to *trading days* from the date specified in the resumption notice, *Voluntarily Scheduled Resource Provider* is expected to ensure that its bids for *energy* and *market ancillary services* appropriately reflect its ability and intention to provide these services.
- (h) The *Voluntarily Scheduled Resource Provider* submits a resumption notice to remove its status as hibernated and become an *inactive voluntarily scheduled resource*, in which case the *voluntarily scheduled resource* will become a *scheduled resource* again from the date specified.
 - (i) In relation to *trading days* from the date specified in the resumption notice, *Voluntarily Scheduled Resource Provider* is expected to ensure that its bids for *energy* and Contingency FCAS appropriately reflect its ability and intention to provide these services.
- (i) The *Voluntarily Scheduled Resource Provider* submits a cessation notice to withdraw the nomination of a *hibernated voluntarily scheduled resource* (and with it their status as a *Voluntarily Scheduled Resource Provider*).
- (j) The maximum hibernation period ends, in which case:
 - (i) The *qualifying resources* cease to be a *voluntarily scheduled resource* and will only be subject to the obligations applying due to their existing classification as:
 - (A) a *market generating unit* that is a *non-scheduled generating unit*;
 - (B) a *market bidirectional unit* that is a *non-scheduled bidirectional unit*;
 - (C) a *market connection point* that is *non-scheduled load*; or
 - (D) one or more *small generating units* or *small bidirectional units* (or any combination) at a *small resource connection point* classified as a *market connection point* in accordance with NER 2.2.8.
 - (ii) The *Voluntarily Scheduled Resource Provider* ceases to be a *Voluntarily Scheduled Resource Provider* and resumes its registration as a *Generator, Integrated Resource Provider* or *Market Customer*.

6.3. Obligations of a Voluntarily Scheduled Resource Provider with an inactive voluntarily scheduled resource or hibernated voluntarily scheduled resource

A *Voluntarily Scheduled Resource Provider* whose *voluntarily scheduled resource* is approved as an *inactive voluntarily scheduled resource* or *hibernated voluntarily scheduled resource* remains the *Voluntarily Scheduled Resource Provider* of that *voluntarily scheduled resource*, but with reduced obligations, as specified in sections 6.3.1 and 6.3.2 below.

For both its *inactive voluntarily scheduled resource* and *hibernated voluntarily scheduled resource*:

- (a) A *Voluntarily Scheduled Resource Provider* retains the obligation to comply with:
 - (i) the data quality requirements in relation to the SCADA it provides, as outlined in section 2.2 of the Power System Data Communications Standard, and in accordance with paragraph 5.4.2 (a)(i).
 - (ii) all obligations relating to the provision of Contingency FCAS from its *voluntarily scheduled resources*, including telemetry obligations specified in the MASS.

6.3.1. Modifications when a voluntarily scheduled resource is inactive

- (a) As outlined in Table 8, an *inactive voluntarily scheduled resource* remains a *scheduled resource* and therefore the *Voluntarily Scheduled Resource Provider* for an *inactive voluntarily scheduled resource* is still required to participate in *central dispatch* and submit *dispatch bids* for *energy*, but is not required to conform to its *dispatch instructions* for *energy* (in accordance with the modifications in NER 3.10A.2(d), (e) and (f)).
- (b) In respect of its *inactive voluntarily scheduled resource*, a *Voluntarily Scheduled Resource Provider* is exempt from the application of the following NER clauses, except in relation to any *market ancillary services* to be provided by any *qualifying resource* forming part of the *voluntarily scheduled resource*:
 - (i) NER 3.8.8
 - (ii) NER 3.8.23B
 - (iii) NER 3.8.22A
 - (iv) NER 4.8.9 (in relation to *directions*)
 - (v) NER 4.9.2
 - (vi) NER 4.9.8
- (c) For its *inactive voluntarily scheduled resource*, a *Voluntarily Scheduled Resource Provider* remains subject to NER 3.8.2(e).
- (d) For the purposes of participation in the ancillary services market:

- (i) An *inactive voluntarily scheduled resource* is eligible to participate in the Contingency FCAS market, provided it continues to meet the requirements specified in the MASS.
- (ii) An *inactive voluntarily scheduled resource* is not eligible to participate in the Regulation FCAS market.

6.3.2. Modifications when a *voluntarily scheduled resource* is hibernated

- (a) As outlined in Table 8 and NER 3.10A.2(1)(2)(ii), a *hibernated voluntarily scheduled resource* is not a *scheduled resource* and none of the requirements applying to *scheduled resources* apply to a *Voluntarily Scheduled Resource Provider* in respect of the *hibernated voluntarily scheduled resource*.
 - (i) A *Voluntarily Scheduled Resource Provider* for a *hibernated voluntarily scheduled resource* does not participate in *central dispatch* for *energy* and should not submit *dispatch bids* for *energy* in respect of its *voluntarily scheduled resource*.
 - (ii) A *hibernated voluntarily scheduled resource* is not required to provide aggregated telemetry data for their provision of *energy* services, excluding under any requirements under paragraph 6.3.2(b).
- (b) For the purposes of participation in the ancillary services market:
 - (i) If applicable, a *hibernated voluntarily scheduled resource* is eligible to participate in the Contingency FCAS market under its existing *ancillary service unit* classification, provided it continues to meet the requirements specified in the MASS.
 - (ii) A *hibernated voluntarily scheduled resource* is not eligible to participate in the Regulation FCAS market.

Table 8 Modifications that apply to a *voluntarily scheduled resource* while it is inactive or hibernated, except in relation to any market ancillary services to be provided by any qualifying resource forming part of the *voluntarily scheduled resource*

Feature	NER clause	Active	Inactive	Hibernated
Must submit <i>dispatch bids</i> for <i>energy</i>	3.8.6	✓	✓	X (In relation to the <i>trading days</i> covered by its hibernation)
Are subject to <i>dispatch bid validation</i> for <i>energy</i>	3.8.8	✓	✓ (Not required under the NER but AEMO proposes to still perform validation)	X (If a hibernated VSR submits a <i>dispatch bid</i> , however, the bid will be validated, but not used in central dispatch)

Feature	NER clause	Active	Inactive	Hibernated
Must conform to dispatch instructions for energy	3.8.23B	✓	X	X
Submitted dispatch bids and rebids for energy must not be false or misleading	3.8.22A	✓	X (AEMO expects, however, that <i>dispatch bids</i> are as representative as possible of intended <i>voluntarily scheduled resource</i> behaviour)	X
Receive and must follow a direction issued by AEMO	4.8.9(a1)(1)	✓	X	X
Receive and must follow a clause 4.8.9 instruction issued by AEMO	4.8.9(a1)(2)	✓	✓	✓
Receive and must follow instructions from AEMO at any time	4.9.2	✓	X	X
Are subject to <i>dispatch bid</i> compliance for energy	4.9.8	✓	X	X

6.4. Notice periods and information

6.4.1. Notice periods for switching between participation statuses

Under NER 3.10A.2(c) and (k), AEMO must specify the process for submitting notices relevant to inactive and hibernation mode. This section outlines the notice periods applicable to a deactivation notice, hibernation notice, reactivation notice, and resumption notice for a *voluntarily scheduled resource*.

Table 9 provides information on the notice periods for the different notice types that a *Voluntarily Scheduled Resource Provider* may submit to AEMO to change the status of a *voluntarily scheduled resource*. Figure 1 shows the process flows for these notice types and how they relate to changing a *voluntarily scheduled resource's* participation status.

Upon receiving a notice, AEMO will:

- (a) Check whether the notice provides the information required and within the notice period required.
- (b) Change the status of the *voluntarily scheduled resource* to the relevant status, commencing from the specified *trading day*.

AEMO may request further information or reject a notice from a *Voluntarily Scheduled Resource Provider* if it does not provide the required information in Table 10, comply with the notice periods in Table 9 or, in the case of hibernation, if the *Voluntarily Scheduled Resource Provider* specifies an expected hibernation period that exceeds the maximum period.

Specifically, for a reactivation notice for a *voluntarily scheduled resource* that has been inactive for more than 12 months or a resumption notice:

- (c) AEMO may within 5 business days of receiving the reactivation notice or resumption notice where a capability re-assessment is required, advise the applicant of any further information or clarification which is required in support of its notice.
- (d) If further information or clarification is requested by AEMO under paragraph 6.4.1(c), the *Voluntarily Scheduled Resource Provider* must submit a new reactivation or resumption notice for the *voluntarily scheduled resource* when they provide this information or clarification to AEMO.
 - (i) The new notice must specify a *trading day* for reactivation or resumption that complies with the notice periods in Table 9.

Table 9 Notice periods for the different notice types that a *Voluntarily Scheduled Resource Provider* may submit to AEMO change the status of a *voluntarily scheduled resource*

Notice period for	Notice type(s)	To be received by
Deactivation notice by <i>Voluntarily Scheduled Resource Provider</i>	<ul style="list-style-type: none"> • Notice for the deactivation of an active <i>voluntarily scheduled resource</i> 	<ul style="list-style-type: none"> • Five <i>trading days</i> prior to first <i>trading day</i> of deactivation period
Reactivation notice by <i>Voluntarily Scheduled Resource Provider</i>	<ul style="list-style-type: none"> • Notice for the reactivation of an <i>inactive voluntarily scheduled resource</i>. Can be combined with a deactivation notice by specifying a date from which the <i>inactive voluntarily scheduled resource</i> will become active (reactivation date) – If a reactivation date in a deactivation notice is more than 12 months after the first day of that deactivation period, a separate reactivation notice must also be provided 	<p>For a <i>voluntarily scheduled resource</i> that has been inactive for less than 12 months:</p> <ul style="list-style-type: none"> • Before 12:30pm EST on the <i>trading day</i> prior to the first <i>trading day</i> of reactivation. <p>For a <i>voluntarily scheduled resource</i> that has been inactive for more than 12 months:</p> <ul style="list-style-type: none"> • Seven <i>trading days</i> prior to first <i>trading day</i> of reactivation.
Hibernation notice by <i>Voluntarily Scheduled Resource Provider</i>	<ul style="list-style-type: none"> • Notice for the temporary hibernation of an active <i>voluntarily scheduled resource</i> 	<ul style="list-style-type: none"> • Seven <i>trading days</i> prior to first <i>trading day</i> of hibernation period

Notice period for	Notice type(s)	To be received by
Scheduled Resource Provider	<ul style="list-style-type: none"> Notice for the temporary hibernation of an <i>inactive voluntarily scheduled resource</i> 	
Resumption reminder/ notification from AEMO to Voluntarily Scheduled Resource Provider	<ul style="list-style-type: none"> Reminder/notification to notify <i>Voluntarily Scheduled Resource Provider</i> that a <i>hibernated voluntarily scheduled resource</i> is reaching the end of its maximum hibernation period 	<ul style="list-style-type: none"> 60, 30 and 14 <i>trading days</i> prior to last <i>trading day</i> of maximum hibernation period
Resumption notice by Voluntarily Scheduled Resource Provider	<ul style="list-style-type: none"> Notice for the resumption of a <i>hibernated voluntarily scheduled resource</i> as an active <i>voluntarily scheduled resource</i> Notice for the resumption of a <i>hibernated voluntarily scheduled resource</i> as an <i>inactive voluntarily scheduled resource</i> 	<ul style="list-style-type: none"> Seven <i>trading days</i> prior to first <i>trading day</i> of resumption
Cessation notice by Voluntarily Scheduled Resource Provider	<ul style="list-style-type: none"> Notice by a <i>Voluntarily Scheduled Resource Provider</i> to withdraw the nomination of a <i>hibernated voluntarily scheduled resource</i> (and cease to be a <i>Voluntarily Scheduled Resource Provider</i>) 	<ul style="list-style-type: none"> Seven <i>trading days</i> prior to cessation date

6.4.2. Notice information requirements

AEMO requires the minimum information outlined in Table 10 to be included in the relevant notice to change the participation status of a *voluntarily scheduled resource*.

For avoidance of doubt, the optional reactivation date that may be included in a deactivation notice in Table 10 is to be taken as the first *trading day* from which that *inactive voluntarily scheduled resource* reactivates as an active *voluntarily scheduled resource*.

AEMO requires *Voluntarily Scheduled Resource Providers* to select a detailed reason code to explain their reason for a deactivation or hibernation notice. These codes will include:

F – Financial/Commercial

P – Planned Outage

U – Unplanned Outage

O – Other

As outlined in section 5.3, a capability re-assessment of a *voluntarily scheduled resource* will be required for resumption notices and for reactivation notices where the *voluntarily scheduled resource* has been inactive for a period of more than 12 months.

Under NER 3.10A.2(h) and (n), depending on the outcomes of the capability re-assessment, AEMO may request for further information or rectification to ensure the *voluntarily scheduled*

resource meets operational requirements. This may result in the need for the *Voluntarily Scheduled Resource Provider* to adjust the date for the change in participation status contained within the original resumption or reactivation notice to meet the notice periods requirement in Table 9.

Table 10 Minimum information requirements for notices to change a *voluntarily scheduled resource's* participation status

Notice sent by <i>Voluntarily Scheduled Resource Provider</i>	Minimum information
Deactivation notice	<ul style="list-style-type: none"> • <i>Dispatchable unit identifier</i> • Participant ID • Reason code for deactivation • Start date (<i>trading day</i>) for deactivation period • Optional: reactivation date (<i>trading day</i>), taken to be the reactivation notice
Reactivation notice	<ul style="list-style-type: none"> • <i>Dispatchable unit identifier</i> • Participant ID • Start date (<i>trading day</i>) for reactivation
Hibernation notice	<ul style="list-style-type: none"> • <i>Dispatchable unit identifier</i> • Participant ID • Reason code for hibernation • Start date (<i>trading day</i>) for hibernation • An acknowledgment that as a condition of hibernating the <i>voluntarily scheduled resource</i>, AEMO will amend: <ul style="list-style-type: none"> – the MaxAvail value for any non-zero energy or Regulation FCAS bids for this <i>voluntarily scheduled resource</i> that apply to <i>trading days</i> during the hibernation period with 0. – the EnablementMin, EnablementMax, LowBreakPoint and HighBreakPoint values of any Contingency FCAS bids for this <i>voluntarily scheduled resource</i> that apply to <i>trading days</i> during the hibernation period with 0.
Resumption notice	<ul style="list-style-type: none"> • <i>Dispatchable unit identifier</i> • <i>Voluntarily scheduled resource</i> status for resumption (active or inactive) • Participant ID • Start date (<i>trading day</i>) for resumption

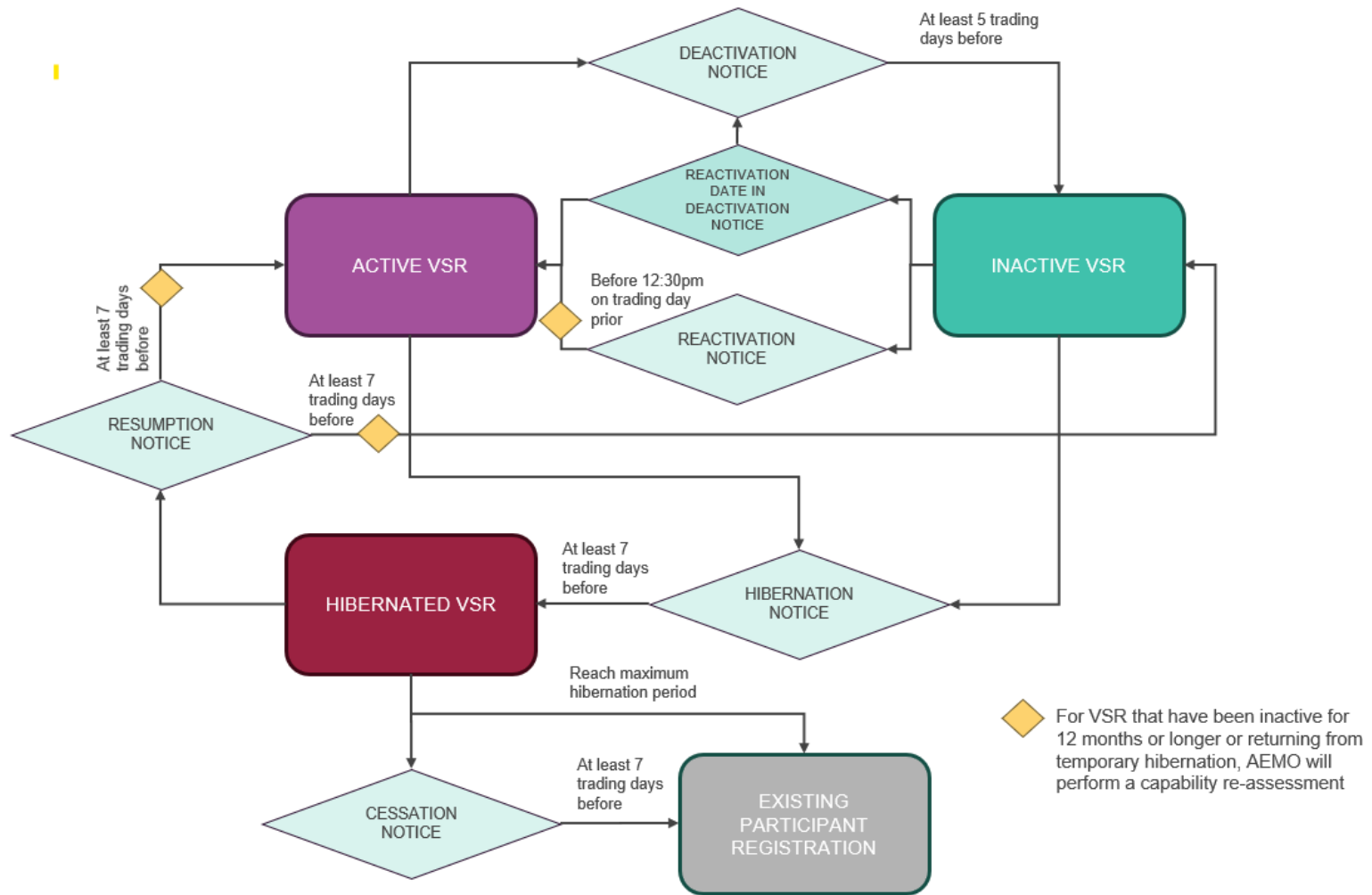


Figure 1 Process flows for changes to a voluntarily scheduled resource's participation status using the relevant notice types

7. Bidding and dispatch

AEMO does not explicitly model *voluntarily scheduled resources* in *Short Term PASA*. *Voluntarily scheduled resources* are, instead, modelled implicitly through AEMO's adjusted demand forecasts and inputs.

7.1. Bid submission format

- (a) A *Voluntarily Scheduled Resource Provider* must submit bids in respect of its active *voluntarily scheduled resource* and *inactive voluntarily scheduled resource* for each *trading day*.
- (b) In relation to a *trading day* when a *Voluntarily Scheduled Resource Provider* has not submitted a bid, AEMO will use in *central dispatch* the latest bid submitted for the prior *trading day*.
- (c) When submitting re-bids, a *Voluntarily Scheduled Resource Provider* must comply with the AER's Rebidding and Technical Parameters Guidelines.⁷
- (d) A *Voluntarily Scheduled Resource Provider* will be able to submit bids for *energy* and *market ancillary services* for their *voluntarily scheduled resource* using the existing channel and processes for the five-minute bid format.
 - (i) *Market ancillary services* bids submitted by a *Voluntarily Scheduled Resource Provider* must be within the limits outlined in AEMO's FCAS model in NEMDE guide,⁸ as determined by the values provided during the *voluntarily scheduled resource's market ancillary services* registration.
 - (ii) Submitting bids in relation to mixed *voluntarily scheduled resources* that are nominated to both produce or to consume electricity, and provided Schedule 3.1 information in accordance with section 7.2(a)(ii)(A), available bid formats will be that of a *scheduled bidirectional unit*, with the exception of energy limits.
 - (iii) Submitting bids in relation to mixed *voluntarily scheduled resources* that are nominated to only produce electricity or to only consume electricity, available bid formats will be that of *scheduled bidirectional units*, taking into account previously submitted Schedule 3.1. information, with the exception of energy limits. This will be achieved by bidding zero availability for *consumption* or *production* in accordance with section 7.2(b)(iii) or 7.2(b)(iv). Bids submitted in relation to *voluntarily scheduled resources* contemplated in this paragraph must include daily *energy* availability (daily energy constraint), if the resource has *energy constraints*.

⁷ See: <https://www.aer.gov.au/industry/registers/resources/Guidelines/rebidding-and-technical-parameters-Guidelines>

⁸ See: https://www.aemo.com.au/-/media/files/electricity/nem/security_and_reliability/dispatch/policy_and_process/fcas-model-in-nemde.pdf

- (iv) Submitting bids in relation to battery only *voluntarily scheduled resources* that provided Schedule 3.1 information in accordance with section 7.2(a) (ii)(B), will be that of a *scheduled bidirectional unit*, and in accordance with section 7.2(c).
- (e) Bids submitted must correspond with aggregated net *production* or *consumption* across all *qualifying resources* in a *voluntarily scheduled resource*.
- (f) Bids submitted in relation to *qualifying resources* at *secondary settlement points* must reflect *production* or *consumption* at the *secondary settlement point* and not at the *primary connection point*.
- (g) Bids submitted in relation to *qualifying resources* that are at an on-market *child connection point* must reflect *production* or *consumption* at the *child connection point* and not at the *parent connection point*.
- (h) *Voluntarily Scheduled Resource Providers* are required to comply with any applicable static or Flexible Export Limit (FEL) or dynamic operating envelope (DOE) for each *qualifying resource* within its *voluntarily scheduled resource* when submitting bids for *central dispatch*.

7.2. Dispatch bids

- (a) Two days ahead of each *trading day* a *Voluntarily Scheduled Resource Provider* must:
 - (i) Submit for each of *production* and *consumption* for its *voluntarily scheduled resources*, a MW capacity profile that specifies the MW available for each of the 288 *trading intervals* in the *trading day*.
 - (ii) Submit daily *energy* availability for *voluntarily scheduled resources* with *energy constraints*, with the exception of *voluntarily scheduled resources* that:
 - (A) Provide non-zero maximum *consumption* and non-zero maximum *production* values through their NER schedule 3.1 bid validation data; or
 - (B) Consist exclusively of one or more *market bidirectional units* that are *non-scheduled bidirectional units*.
 - (iii) Ensure that if the dispatchable capacity of the *voluntarily scheduled resource* that was previously nominated to either *produce* or *consume* electricity changes to include both the *production* and *consumption* of electricity, submit a new bid to remove any daily *energy* availability (*daily energy constraint*) previously submitted.
- (b) A *Voluntarily Scheduled Resource Provider* must comply with the applicable requirements of NER 3.8.6 when submitting a *dispatch* bid. This includes a *dispatch* bid for a *voluntarily scheduled resource* meeting the same requirements as that for an existing *scheduled bidirectional unit*, *scheduled generator* or *scheduled load*, which requires that:

- (i) For a *voluntarily scheduled resource* that meets the criteria under paragraphs 7.2(a)(ii)(A) or (B), the bid may contain volumes in up to 10 *price bands* for *production* from, and up to 10 *price bands* for *consumption* by, the *voluntarily scheduled resource* for each of the 288 *trading intervals* in the *trading day*.
- (ii) Prices in *bidirectional unit* bid bands described in paragraph 7.2(b)(i) are required to monotonically increase in each direction.
- (iii) For a mixed *voluntarily scheduled resource* that provides zero maximum *consumption* and non-zero maximum *production* values through their NER Schedule 3.1 bid validation data, the bid may contain up to 10 *price bands* for *production* from the *voluntarily scheduled resource* for each of the 288 *trading intervals* in the *trading day*.
 - (A) The 10 *price bands* for *consumption* must have 0 MW values for such *voluntarily scheduled resources* and the bid must not include energy limits.
- (iv) For mixed *voluntarily scheduled resources* that provide non-zero maximum *consumption* and zero maximum *production* values through their NER Schedule 3.1 bid validation data, the bid may contain up to 10 *price bands* for *consumption* by the *voluntarily scheduled resource* for each of the 288 *trading intervals* in the *trading day*.
 - (A) The 10 *price bands* for *production* must have 0 MW values for such *voluntarily scheduled resources* and the bid must not include energy limits.
- (v) Prices specified in *dispatch bids* are to apply at the *market connection point* of each *qualifying resource* of the *voluntarily scheduled resource*, including where the *market connection point* is a *secondary settlement point*.
- (c) For a battery only *voluntarily scheduled resource*, the actual SCADA state of charge (initial energy available) in each *trading interval* in respect of the *voluntarily scheduled resource dispatchable unit identifier* must also be provided.
- (d) For a mixed *voluntarily scheduled resource* that includes batteries as *qualifying resources* and meet the criteria under section 7.2(a)(ii)(A), the actual SCADA state of charge (initial energy available) in each *trading interval* in respect of the *voluntarily scheduled resource dispatchable unit identifier* may also be provided.
- (e) Under NER 3.8.3A(b)(1)(iv), the minimum *ramp rate* is equal to the minimum *ramp rate* requirement for the aggregation of *qualifying resources* within the *voluntarily scheduled resource*.

- (i) *Dispatch bids for a voluntarily scheduled resource must meet the requirements of AEMO's Dispatch procedure under Section 2.8 Ramp rates in energy dispatch instructions.*⁹
- (f) All *voluntarily scheduled resource* portfolios regardless of VSR zone will receive a *loss factor* of one for the purposes of *central dispatch* (see section 4.1)

7.3. Bidding for inactive voluntarily scheduled resources or hibernated voluntarily scheduled resources

Under NER 3.10A.2(e)(2), AEMO must specify for the purposes of *central dispatch* how an *inactive voluntarily scheduled resource* is to be treated by AEMO.

- (a) In accordance with the NER, a *Voluntarily Scheduled Resource Provider* must submit bids to AEMO when a *voluntarily scheduled resource* is inactive:
 - (i) *Energy bids* should reflect expected MW *production* or *consumption* or both (to the extent feasible). *Energy bids* will be used by AEMO to maintain operational visibility and to improve regional demand forecasting.
 - (ii) Contingency FCAS bids must reflect the *voluntarily scheduled resource's* availability to provide the service.
 - (iii) Regulation FCAS must be bid unavailable to prevent an *inactive voluntarily scheduled resource* from being enabled.
- (b) Energy and Regulation FCAS bids for *inactive voluntarily scheduled resources* are not used in *central dispatch*.
- (c) Energy bids for *inactive voluntarily scheduled resources* will, however, be used in pre-dispatch.

In relation to a *Voluntarily Scheduled Resource Provider's hibernated voluntarily scheduled resource*:

- (d) Subject to the requirements set out in paragraph 6.2(f), a *Voluntarily Scheduled Resource Provider* is not required to and should not submit bids for *energy* for its *hibernated voluntarily scheduled resource*, as *hibernated voluntarily scheduled resources* are not *scheduled resources* and do not participate in the *central dispatch* for *energy*.

7.4. Bid validation

Under NER 3.10A.2(e)(1), for the purposes of *central dispatch*, AEMO is not required to include *dispatch bids* submitted in respect of an *inactive voluntarily scheduled resource* in *central dispatch* or validate those *dispatch bids* in accordance with NER 3.8.8.

⁹ See: https://aemo.com.au/-/media/files/electricity/nem/security_and_reliability/power_system_ops/procedures/so_op_3705-dispatch.pdf?la=en

- (a) However, *AEMO* has elected to apply bid validation for active, hibernated and inactive *voluntarily scheduled resources*.
- (b) *NER Schedule 3.1*, which refers to the standard data requirements for verification and compilation of *dispatch bids*, is applicable to active *voluntarily scheduled resources* and *inactive voluntarily scheduled resources*.
- (c) For *voluntarily scheduled resources*, *AEMO* undertakes bid price validations in accordance with its existing processes, which includes those specified in the Bidirectional unit price band bid validation factsheet.¹⁰

7.5. Dispatch instructions

Voluntarily Scheduled Resource Providers will be required to build capability to receive and conform with *dispatch instructions* from *AEMO* for active *voluntarily scheduled resources* using the existing *dispatch* instruction formats for generating units, loads or bidirectional units.

- (a) A *Voluntarily Scheduled Resource Provider* must ensure that each *qualifying resource* in an active *voluntarily scheduled resource* can always comply with its latest *dispatch bid*.
- (b) *AEMO* may at any time give an instruction to a *Voluntarily Scheduled Resource Provider* in relation to its *voluntarily scheduled resource*, in accordance with *NER 4.9.5(a)*.
- (c) Under *NER 3.10A.2(f)(2)*:
 - (i) *Inactive voluntarily scheduled resources* are not required to follow *dispatch instructions*, but must conform with instructions received while participating in Contingency FCAS, in accordance with the MASS.
- (d) *Inactive voluntarily scheduled resources* will receive *energy dispatch* targets that will be equal to the last measured SCADA consumption or production value available at the start of the *trading interval*.
- (e) *Hibernated voluntarily scheduled resources* will receive *energy dispatch* targets equal to zero.

8. Conformance

NER 3.10A.3(b)(5)(iv) requires *AEMO* to specify the *dispatch* conformance criteria that will be applied to *voluntarily scheduled resources* to ensure they conform to *AEMO*'s operational requirements. These criteria reflect *NER 3.8.23B*.

- (a) *Dispatch* conformance criteria are only applicable to active *voluntarily scheduled resources*. While *Voluntarily Scheduled Resource Providers* are still able to submit bids for

¹⁰ See: <https://aemo.com.au/-/media/files/initiatives/integrating-energy-storage-systems-project/fact-sheets/fact-sheet--bdu-bid-validation--may-2024.pdf?la=en>

its *inactive voluntarily scheduled resource* in accordance with NER 3.8.6, they are not required to follow *dispatch instructions*.

- (b) If an active *voluntarily scheduled resource* fails to respond to *dispatch instructions*, AEMO will follow respective processes prescribed in the Dispatch procedure.¹¹

9. Metering

In accordance with NER 3.10A.3(b)(5)(v), AEMO must specify the acceptable types of *metering installations* for participating *voluntarily scheduled resource connection points* within the *voluntarily scheduled resource guidelines*. These are:

- (a) All *metering installations* at *voluntarily scheduled resource connection points* must comply with the requirements of NER Chapter 7, and AEMO's procedures.
- (b) The metering installation at a *voluntarily scheduled resource connection point* must have remote acquisition and must produce and store bidirectional *trading interval* energy data.
- (c) Where a *qualifying resource* is located at a *secondary settlement point*,¹² the *financially responsible Market Participant* at that *secondary settlement point* will be the *Voluntarily Scheduled Resource Provider* in accordance with the following conditions:
- (i) For a *secondary settlement point* with a type 8A metering installation (large customer), the *financially responsible Market Participant* (the *Voluntarily Scheduled Resource Provider*) may be a different Market Participant to that at the premises *connection point*.
- (ii) For a *secondary settlement point* with a type 8B metering installation (small customer), the *financially responsible Market Participant* (the *Voluntarily Scheduled Resource Provider*) must be the same Market Participant as that at the premises *connection point*.
- (d) Where a *qualifying resource* is located at an on-market *child connection point* within an *embedded network*, the *financially responsible Market Participant* at that on-market *child connection point* will be the *Voluntarily Scheduled Resource Provider*.
- (e) Where a *qualifying resource* is located at a *secondary settlement point* related to an on-market *child connection point* within an *embedded network*, the *financially responsible Market Participant* at that *secondary settlement point* will be the *Voluntarily Scheduled Resource Provider* in accordance with the following conditions:

¹¹ See: https://www.aemo.com.au/-/media/Files/Electricity/NEM/Security_and_Reliability/Power_System_Ops/Procedures/SO_OP_3705%20Dispatch.pdf

¹² Under the Unlocking CER Benefits rule change, consumers and agents will be able to identify and manage flexible, price-responsive CER from inflexible or passive energy use by establishing a *secondary settlement point*(s) for controllable resource(s) within the electrical installation. See <https://www.aemc.gov.au/rule-changes/unlocking-CER-benefits-through-flexible-trading>.

- (i) For a *secondary settlement point* with a type 8A metering installation (large customer), the *financially responsible Market Participant* (the *Voluntarily Scheduled Resource Provider*) may be a different Market Participant to that at the on-market *child connection point*.
- (ii) For a *secondary settlement point* with a type 8B metering installation (small customer), the *financially responsible Market Participant* (the *Voluntarily Scheduled Resource Provider*) must be the same Market Participant as that at the on-market *child connection point*.

10. Data and information sharing

10.1. Data sharing between *Voluntarily Scheduled Resource Providers* and *Distribution Network Service Providers* and (where relevant) *Transmission Network Service Providers*

NER 3.10A.3(b)(6)(i) requires AEMO to specify the processes for *Voluntarily Scheduled Resource Providers* to share data with *Distribution Network Service Providers* or (where relevant) *Transmission Network Service Providers*.

The processes for data sharing between *Voluntarily Scheduled Resource Providers* and *Distribution Network Service Providers* and (where relevant) *Transmission Network Service Providers* may be facilitated through the MITE program and the [CER Data Exchange](#), or another appropriate mechanism which allows for data and information sharing between multiple market participants.

10.2. Disclosure of data collected by AEMO from *Voluntarily Scheduled Resource Providers* to *Distribution Network Service Providers* and (where relevant) *Transmission Network Service Providers*

NER 3.10A.3(b)(6)(ii) requires AEMO to specify the processes for the disclosure of data collected by AEMO from *Voluntarily Scheduled Resource Providers* to *Distribution Network Service Providers* and *Transmission Network Service Providers* (as applicable), including obligations of confidentiality that will apply to any such disclosures.

Table 11 outlines AEMO's data and processes for sharing *voluntarily scheduled resource* data collected from *Voluntarily Scheduled Resource Providers* with *Distribution Network Service Providers* and where relevant *Transmission Network Service Providers* and *Embedded Network Managers*.

During nomination under paragraph 2.2(d)(i), a *Voluntarily Scheduled Resource Provider* may provide written consent for the relevant *Distribution Network Service Provider(s)*, under the

confidentiality obligation in section 10.2.1, to receive pre-dispatch information from AEMO for the *Voluntarily Scheduled Resource Provider's voluntarily scheduled resource*.

10.2.1. Arrangements for provision of *voluntarily scheduled resource* information

Further to the confidentiality obligations outlined in Table 11:

- (a) A *Distribution Network Service Provider* and where relevant *Transmission Network Service Provider* are only entitled to receive data related to a *voluntarily scheduled resource* that contains *qualifying resource(s)* that are connected to their distribution or transmission network (as relevant).
- (b) A *Distribution Network Service Provider* or *Transmission Network Service Provider* that receives, accesses or uses pre-dispatch information for a *voluntarily scheduled resource* that contains *qualifying resource(s)* connected to its distribution or transmission *network* must only use such information to carry out its role under the NER and these Guidelines in relation to that *voluntarily scheduled resource*.

Table 11 AEMO's processes for sharing voluntarily scheduled resource data collected from Voluntarily Scheduled Resource Providers with Distribution Network Service Providers and where relevant Transmission Network Service Providers

Data type	Voluntarily scheduled resource status	Frequency	DNSP/TNSP access	Confidentiality obligations relevant to disclosure
NMIs for qualifying resources (including secondary settlement points) within voluntarily scheduled resource (excluding on-market child NMIs)	All statuses	As frequently as changes occur, but maximum once per day	Yes	Data to be treated as confidential information under the NER and not shared with third parties. Existing confidentiality obligations regarding NMI standing data in MSATS apply under the MSATS Procedures.
Device level information for qualifying resource(s) in a voluntarily scheduled resource	All statuses	As frequently as changes occur, but maximum once per day	Partial – limited to NMIs in their network and devices under NER 3.7E	Data to be treated as confidential information under the NER and not shared with third parties.
Embedded network on-market child NMIs within voluntarily scheduled resource	All statuses	As frequently as changes occur	No	Data to be treated as confidential information under the NER and not shared with third parties. Existing confidentiality obligations regarding NMI standing data in MSATS apply under the MSATS Procedures.
Dispatchable unit identifier	All statuses	As frequently as changes occur	Yes	This information is not confidential.
Voluntarily scheduled resource status – active, inactive, hibernated	All statuses	Daily – Post market	Yes	This information is not confidential.
Ramp rates	Active, Inactive	Daily – Post market	Yes	Existing confidentiality obligations under access to the Markets Portal, outlined in the Guide to User Rights Management.
Dispatch bids	Active, Inactive	Daily – Post market	Yes	This information is not confidential.
Dispatch bids (Max Avail)	Active, Inactive	After every PDPASA & STPASA run	Yes	This information is not confidential.

Data type	Voluntarily scheduled resource status	Frequency	DNBP/TNSP access	Confidentiality obligations relevant to disclosure
Dispatch targets	Active, Inactive	Daily – Post market	Yes	This information is not confidential.
Pre-dispatch targets	Active, Inactive	After every Pre-dispatch run (if written consent is received from <i>Voluntarily Scheduled Resource Provider</i>)	Yes	Pre-dispatch information to be treated as confidential information under the NER and not shared with third parties.
Pre-dispatch targets	Active, Inactive	Daily – Post market	Yes	This information is not confidential.
Final <i>dispatch</i> quantity	Active	Daily – Post market	Yes	This information is not confidential.
Final <i>dispatch</i> price	Active	Daily – Post market	Yes	This information is not confidential.
Non-conforming <i>voluntarily scheduled resources</i>	Active	Post event, as frequently as they occur	Yes	This information is not confidential.
Settlement quantities	All statuses	N/A	No – confidential.	This information is confidential information and as such AEMO will not share this with DNSPs or TNSPs.

Version release history

Version	Effective Date	Summary of Changes
1.0	23 May 2027	First Draft Guidelines
1.1	23 May 2027	Second Draft Guidelines
1.2	23 May 2027	Final Guidelines