

Information for intending Voluntarily Scheduled Resource Providers



PROJECT: Integrating Price Responsive Resources into the NEM (IPRR)

DATE: December 2025

VERSION: 1.0



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1. Context & purpose

CONTEXT


- The concept of a Voluntarily Scheduled Resource (VSR) was established by the *Integrating price-responsive resources into the NEM* (IPRR) rule.
- Prospective VSR Providers (VSRPs) have requested early information from AEMO to support their development and readiness for participating in IPRR and the associated VSR incentive mechanism (VIM).
- AEMO's technical specifications, guides and market procedures will be updated for IPRR and, once complete, will be the authoritative source.
 - [Draft technical specifications](#) are expected early May 2026
 - Most market procedure updates will be finalised by June 2026
 - Stakeholders can keep informed about progress of technical specification, guide and procedure updates through [NEM Reform forums](#).

PURPOSE

- To provide to prospective VSRPs with existing resources, expected resources and information on IPRR changes as early as possible to help them evaluate nominating, operating and ceasing a VSR. **This material will be updated as the IPRR implementation progresses.**
- To support prospective VSRPs in sourcing system build/update estimates from their vendors to inform a potential VIM tender application.
 - Proposed IPRR changes and supporting information resources are provided in relation to the end-to-end life cycle of a VSR.
 - Additional resources have been included for potential participants seeking to register in the NEM for the first time.

Participants should perform their own detailed impact analysis of the IPRR rule because AEMO cannot predict the scale or nature of impacts for individual participants.

2. How to keep informed: NEM Reform program engagement

Forums	Forum focus 	Cadence	Approach
Executive Forum	Program overview and status update	3 per Year	Nomination
Reform Delivery Committee (RDC)	Long term implementation planning perspective	Quarterly	Nomination
Program Consultative Forum (PCF)	Inflight initiatives status & co-ordination	Monthly	Open
Implementation Forum	Implementation of reforms	Monthly	Open
Electricity Wholesale (EWCF) & Electricity Retail (ERCF) Consultative Forums	Procedures working groups	Monthly	Open
Industry Testing Working Group	Testing	Monthly	Open
Working Groups	Inflight	As appropriate	As appropriate



To learn more, please visit:

- [AEMO | NEM Reform Program Forums](#)
- [AEMO | NEM Reform Program Initiatives](#)
- [AEMO | Industry Meetings Calendar](#)
- or contact the program at NEMReform@aemo.com.au.

Subscribe to the NEM Reform Newsletter [here](#)

Focus / working groups for inflight initiatives include:

- Initiative working groups
- Market Integration Technology Enhancement WG (IDX/IDAM/PC)
- Industry Testing Working Group (ITWG) – IT technical implementations

3. IPRR key terms & general information

TERM	MEANING
Voluntarily Scheduled Resource (VSR)	An aggregation of price responsive resources that can be scheduled and dispatched in the NEM
Voluntarily Scheduled Resource Provider (VSRP)	The operator of a VSR
Dispatch mode	The new voluntary framework set up by the IPRR rule to allow VSRs to participate in the NEM
VSR participation modes	<ul style="list-style-type: none">• ACTIVE – full VSR participation in dispatch mode• INACTIVE – partial VSR opt out of dispatch mode• HIBERNATED – full VSR opt out of dispatch mode (available for a minimum of 30 days to a maximum of 18 months)

For more information visit:	AEMO NEM Reform IPRR	VSR Guidelines	VSR Incentive Mechanism procedure	AEMC IPRR rule development
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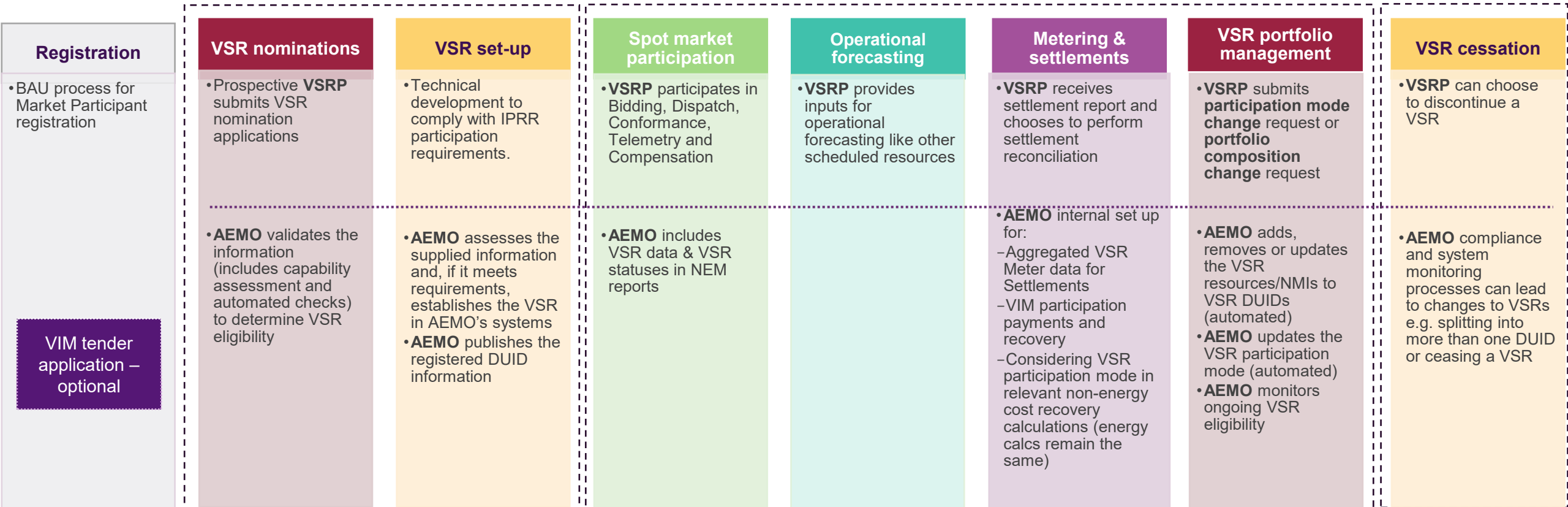
4. Overview of the VSR life cycle



CREATE 

OPERATE 

FINISH 



VSR Life Cycle – Market participant registration



IPRR impact	Description	Responsibility	What's changing?	Key resources
<p>No change to registration process</p>	<ul style="list-style-type: none"> • There is no new participant registration category for market participants with VSRs. • VSRPs must be registered as an Integrated Resource Provider (IRP), Market Customer or Generator in accordance with the existing participant registration framework. • Note: A VSRP must be the financially responsible Market Participant (FRMP) for the NMIs it is nominating into VSRs. 	<ul style="list-style-type: none"> • Prospective participant submits a registration application • AEMO assesses it and where appropriate approves the registration 	<ul style="list-style-type: none"> • No change 	<ul style="list-style-type: none"> • AEMO Registration – including fact sheets and guides • AEMO Register as an IRP in the NEM • Application Guide for Registration as a Generator or Integrated Resource Provider

VSR Life Cycle – VSR nominations



IPRR impact	Description	Responsibility	What's changing?	Key resources
<p>New process: VSR Nomination</p>	<ul style="list-style-type: none"> Apply to nominate qualifying resources into a VSR Gather & submit the required VSR nomination information (including CSV files) to AEMO. Working with AEMO, participants will self-manage VSRs via the Portfolio Management System (PMS) once the VSRs are established (see 'VSR portfolio management' below). NOTE: PMS is currently used by Market Customers and Small Resource Aggregators who provide contingency FCAS, and Wholesale Demand Response Providers. 	<p>Participant & AEMO</p>	<ul style="list-style-type: none"> New initial capability assessment process for VSRs to ensure they have the technical capability to participate in scheduling and dispatch processes. Introduction of: <ul style="list-style-type: none"> minimum VSR capacity threshold for participation. VSR dispatchable capacity VSR nameplate rating. Introduction of VSR zones. Modified CSV file format to accommodate VSRs. 	<ul style="list-style-type: none"> VSR Guidelines include requirements for: <ul style="list-style-type: none"> VSR nomination process VSR capability assessment Portfolio management requirements and updates NER Schedule 3.1 bid validation data VSR zones. Example VSR dispatchable capacity and nameplate rating calculations are described in section 4.2.2 of the VSR Guidelines Second Draft Report. AEMO will provide VSRPs with additional technical guidance in separate documents, which will be published and updated before the IPRR rule takes effect in May 2027. AEMO will also update its web-based user guide for the Portfolio Management System to include the VSR nomination process.

VSR Life Cycle – VSR nominations cont'd



Impact	Description	Responsibility	What's changing?	Resources
New process: VSR Nomination	<ul style="list-style-type: none"> • Telemetry set up – can be SCADA or SCADA Lite • Participant to provide aggregated telemetry for active and inactive VSRs in accordance with 'Power System Data Communications Standard'. 	Participant	<ul style="list-style-type: none"> • No change to AEMO process to establish telemetry • Participant has the option to connect via SCADA Lite if eligible • Sub 5MW VSRs can provide SCADA data less frequently than every 4 seconds. 	SCADA or SCADA Lite connection: <ul style="list-style-type: none"> • VSR Guidelines aggregated telemetry data and communications requirements. • AEMO Network connections - includes process overview • Connecting with SCADA Lite
	<ul style="list-style-type: none"> • Automated Generation Control (AGC) if required - set up if participating in Regulation FCAS. 	Participant	<ul style="list-style-type: none"> • No change to AEMO process to establish Automated Generation Control • No change to classification for FCAS markets - this is independent of VSR nomination process 	AGC establishment (only if required): <ul style="list-style-type: none"> • Ancillary services web page • Guide to frequency control ancillary services • Market ancillary services specification and FCAS verification tool • Guide-to-ancillary-services-in-the-national-electricity-market.pdf • Technical Specification - AGC, SCADA Dispatch Instructions, and Fast Start Facility Operational Behaviour.docx

VSR Life Cycle – VSR set-up



Impact	Description	Responsibility	What's changing?	Resources
<p>New process:</p> <p>Create and set-up VSRs in AEMO systems</p>	VSR is set up in AEMO systems.	AEMO	<p>No implications for Participants.</p> <p>By the IPRR commencement date, AEMO's :</p> <ul style="list-style-type: none"> • solutions needs to be updated and tested • business needs to be ready to operate • IT support needs to be in place 	n/a

VSR Life Cycle – Spot market participation



Impact	Description	Responsibility	What's changing?	Resources
<p>VSRs will be scheduled resources (unless hibernated) and (depending on participation mode) be included in:</p> <ul style="list-style-type: none"> Bidding Dispatch Directions & Interventions Conformance Compensation <p>Note - Participation rules & validations will vary based on VSR participation mode, whether active, inactive or hibernated.</p>	<p>VSRPs to submit Energy and FCAS bids for 'Active' and 'Inactive' VSRs.</p>	<p>VSRP</p>	<ul style="list-style-type: none"> No change to bid submission channels: VSRPs will use the existing bid submission process for each VSR DUID – the bid submission channels are not changing (FTP, API or web bidding) Modified BDU bid format to accommodate VSRs noting that the type of information submitted is not changing. Some values will only apply depending on VSR dispatch subtype and dispatchable capacity: The bidding pathway, the values provided in respective fields, state of charge and daily energy constraint will be applied in accordance with the VSR Guidelines, depending on the VSR dispatch subtype and dispatchable capacity values. 	<ul style="list-style-type: none"> VSR Guidelines provide information on bidding, NEMDE processes and dispatch conformance. BDU Bidding Format (Refer to section 7.2 Bidding submissions in Tech Specs) BDU-bid-validation fact sheet AEMO Dispatch information <p>Note – As part of IPRR implementation, the following technical specifications will be updated to reflect the IPRR rule and VSR Guidelines.</p> <ul style="list-style-type: none"> EMMS technical specifications May 2027 EMMS data model technical specifications v5.8

VSR Life Cycle – Spot market participation cont'd



Market participant registration

VSR nomination

VSR set-up

Spot market participation

Operational forecasting

Metering & settlement

VSR portfolio management

VSR cessation

Impact	Description	Responsibility	What's changing?	Resources
<p>VSRs will be scheduled resources (unless hibernated) and (depending on participation mode) be included in:</p> <ul style="list-style-type: none"> Bidding Dispatch Directions & Interventions Conformance Compensation <p><i>Note - Participation rules & validations vary based on VSR participation mode, whether active, inactive or hibernated.</i></p>	<p>Active VSRs:</p> <ul style="list-style-type: none"> Receive and conform to dispatch instructions at the VSR DUID level. For example, by disaggregating dispatch instructions to individual NMs within the VSR. Always have operational contacts available to receive and act on interventions, like directions. <p>Inactive VSRs:</p> <ul style="list-style-type: none"> Receive dispatch instructions at the VSR DUID level. Choose whether to conform to dispatch instructions. If also providing Contingency FCAS, respective contingency FCAS obligations do not change. <p>All VSRs in any participation mode must conform with their applicable distribution / transmission connection agreements, including any applicable network limits.</p>	<p>VSRP</p>	<p>No change: Existing Pre-Dispatch, Dispatch, Conformance, Directions, Interventions and Compensation processes apply to active VSRs.</p> <p>These processes selectively apply depending on VSR participation mode. For details, please see Participation rules & validations.</p>	<ul style="list-style-type: none"> VSR Guidelines provide information on bidding, NEMDE processes and dispatch conformance. AEMO Dispatch information <p><i>Note – As part of IPRR implementation, the following technical specifications will be updated to reflect the IPRR rule and VSR Guidelines.</i></p> <ul style="list-style-type: none"> EMMS technical specifications May 2027 EMMS data model technical specifications v5.8

VSR Life Cycle – Operational forecasting



Impact	Description	Responsibility	What's changing?	Resources
<p>VSRs included in demand forecast calculations and PASA forecast calculations.</p>	<ul style="list-style-type: none"> VSRs are not explicitly modelled in PASA but implicitly modelled through adjusted demand forecasts. VSRPs will be required to submit data for pre-dispatch (PD) & short term (ST) PASA as part of bidding, using the existing process for active and inactive VSRs. VSRPs are not required to submit data for medium term (MT) PASA. 	VSRP	<p>No change: Use existing bid submission process using modified BDU bid structure for submitting PASA attributes (such as Available Capacity, PASA Avail, Recall Period).</p>	<ul style="list-style-type: none"> VSR Guidelines provide information on bidding, NEMDE processes and dispatch conformance. BDU Bidding Format (Refer to section 7.2 Bidding submissions) AEMO Dispatch information <p><i>Note</i> – As part of IPRR implementation, the following technical specifications will be updated to reflect the IPRR rule and VSR Guidelines.</p> <ul style="list-style-type: none"> EMMS technical specifications May 2027 EMMS data model technical specifications v5.8
	<p>NEM reports: Updates to following NEM reports to include VSR data (based on participation mode):</p> <ul style="list-style-type: none"> Bidding Dispatch PDPASA STPASA 	AEMO	<p>Specific NEM Reports for the areas listed will be updated to include VSRs based on the Participation mode – <i>Active, Inactive, Hibernated</i>. Refer to Participation Rules & Validations for some additional details.</p>	<p>AEMO collects and collates a range of data relating to the National Electricity Market (NEM). AEMO will be publishing the VSR participation mode data in Pre-Dispatch and Dispatch NEM Reports (private and public next day). Public reports will be available at AEMO Nemweb data Both public and private reports can be accessed via Data Interchange in-line with participant subscriptions.</p>

VSR Life Cycle – Metering and settlement



Market participant registration

VSR nomination

VSR Set-up

Spot market participation

Operational forecasting

Metering & settlement

VSR portfolio management

VSR cessation

Impact	Description	Responsibility	What's changing?	Resources
<p>Changes to Settlements, Billing and Invoicing</p>	<p>Acceptable metering installation types for VSR qualifying resources are set out in the VSR Guidelines.</p> <p>Updated settlement reconciliation processes:</p> <ul style="list-style-type: none"> To reflect that 'Active' VSRs are not subject to RERT or Energy Directions cost recovery. VIM participation payment amounts are applied to statements, expected to be at most monthly (likely to be paid in the first billing week of the month) VIM recovery amounts are applied to statements when payments have been made, using the share of ACE in the recovery billing period, to determine the share of the recovery cost VIM establishment & administrative costs are applied in annual Participation fee calculations 	<p>VSRPs</p>	<p>No changes to:</p> <ul style="list-style-type: none"> Metering data processes Energy settlement calculations <p>Likely change to MMS Data Model - Settlement Data:</p> <p>To be able to fully reconcile the cost recovery of VSR participation payments, CRMPs would need to update to the new data model (v5.8). However existing use of the model would not be impacted. There will be changes to tables to:</p> <ul style="list-style-type: none"> Consider VSRs in relevant cost recovery calculations. Cater for new VIM participation payments and cost recovery. 	<p>NEM Settlements:</p> <ul style="list-style-type: none"> Procedures and guides <p>Settlements report definitions can be located via Market Data NEMWeb for:</p> <ul style="list-style-type: none"> Settlements Summary Billing Summary Settlement Statement Layouts <p><i>Note</i> – As part of IPRR implementation, the following technical specifications will be updated to reflect the IPRR rule and VSR Guidelines.</p> <ul style="list-style-type: none"> EMMS technical specifications May 2027 EMMS data model technical specifications v5.8

VSR Life Cycle – VSR portfolio management



Impact	Description	Responsibility	What's changing?	Resources
New process: VSR Portfolio Management	VSRPs self-manage their VSR portfolio using AEMO's Portfolio Management System .	VSRP	<p>PMS screens will be updated to allow for:</p> <ul style="list-style-type: none"> Submitting notices for VSR participation mode changes Adding, removing or updating the VSR qualifying resources (NMI) to VSR DUID. 	<p>Notice period requirements are defined in VSR Guidelines.</p> <p>As part of IPRR implementation, AEMO will update its web-based user guide for the Portfolio Management System to include the VSR portfolio management processes.</p>
	Ongoing monitoring of VSR eligibility	AEMO	<p>Daily monitoring will ensure a VSR:</p> <ul style="list-style-type: none"> Comprises of one or more qualifying resources Maintains or exceeds minimum threshold Meets other required operating conditions. 	<p>Monitoring requirements are defined in VSR Guidelines.</p>

VSR Life Cycle – VSR end of life



Impact	Description	Responsibility	What's changing?	Resources
<p>New process: Manage VSR lifecycle</p>	<p>New process to enable VSRPs to discontinue a VSR.</p>	<p>VSRP</p>	<ul style="list-style-type: none"> • VSRPs will submit cessation notices via AEMO's Portfolio Management System. • VSRs must be hibernated before they can be discontinued. • Cessation notice periods for hibernated VSRs are established in the VSR Guidelines, currently 7 days. 	<ul style="list-style-type: none"> • AEMO will provide VSRPs with additional technical guidance in separate documents, which will be published and updated before the IPPR rule takes effect in May 2027. • AEMO will also update its web-based user guide for the Portfolio Management System to include the process for submitting a cessation notice.

Appendices

1. GLOSSARY
2. KEY DIFFERENCES BETWEEN VSR PARTICIPATION MODES

1. Glossary

TERM	DEFINITION
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
API	Application Programming Interface
BDU	Bidirectional Unit
CER	Consumer Energy Resources
CRMP	Cost recovery market participant
DER	Distributed energy resources
DNSP	Distribution network service provider
DRSP	Demand response service provider
DUID	Dispatchable unit identifier
FCAS	Frequency control ancillary service
FPP	Frequency performance payments
FRMP	Financially responsible market participant
HLIA	High level implementation assessment
IDAM	Identity access and management
IDX	Industry data exchange

TERM	DEFINITION
IPRR	Integrating price responsive resources
IRP	Integrated resource provider
MASS	Market ancillary services specification
MITE	Market interface technology enhancement
MT PASA	Medium term projected assessment of system adequacy
NEM	National electricity market
NEMDE	National electricity market dispatch engine
NER	National electricity rules
NMI	National metering identifier
NSP	Network service provider
PD PASA	Pre dispatch projected assessment of system adequacy
PMS	Portfolio management system
SCADA	Supervisory control and data acquisition
ST PASA	Short term projected assessment of system adequacy
VPP	Virtual Power Plants
VSR	Voluntarily scheduled resource
VSRP	Voluntarily scheduled resource provider
WDRM	Wholesale Demand Response Mechanism

- A comprehensive glossary of terms (and measurements) can be found at AEMO's website: <https://aemo.com.au/learn/industry-terminology>
- For rules terms, see the relevant industry rules on the [AEMC website](#) > [Energy rules](#).

2. Key differences between VSR participation modes



RULES AND VALIDATIONS	PARTICIPATION MODE			
	ACTIVE	INACTIVE	HIBERNATED	
Participation in Spot Market, Demand Forecast & Ops Planning	Bid Submission • Energy • C.FCAS • R.FCAS	Similar to other Scheduled Resources	<ul style="list-style-type: none"> • Energy – Indicative • C.FCAS – Accurate • R.FCAS - Not allowed 	<ul style="list-style-type: none"> • Energy - Not applicable as not a Scheduled Resource • C.FCAS – Accurate • R.FCAS - Not allowed
	Bid Validation • Energy • C.FCAS • R.FCAS	Similar to other Scheduled Resources	<ul style="list-style-type: none"> • Energy - Same as Active • C.FCAS - Same as Active • Reject R.FCAS Bids - if there are non-zero bids 	<ul style="list-style-type: none"> • Energy - Not applicable as not a Scheduled Resource • C. FCAS - Same as Active • Reject R.FCAS Bids - if there are non-zero bids
	Dispatch Instructions	Same as other Scheduled Resources	<ul style="list-style-type: none"> • Energy - Constrained to INITIAL MW value (Latest telemetered value) • C.FCAS - Same as Active • R.FCAS - Zero MW 	<ul style="list-style-type: none"> • Energy - Zero MW • C.FCAS - Same as Active • R.FCAS - Zero MW
	Dispatch Conformance	Different to other Scheduled Resources (AEMO will propose a rule change request to make this the same as other Scheduled Resources)	<ul style="list-style-type: none"> • Energy - Not applicable • R.FCAS - Not applicable • C.FCAS - Not applicable, but existing clawback processes apply 	<ul style="list-style-type: none"> • Energy - Not applicable • R.FCAS - Not applicable • C.FCAS - Not applicable, but existing clawback processes apply
	Pre-Dispatch Instruction	Same as other Scheduled Resources	<ul style="list-style-type: none"> • Energy - Same as Active • C.FCAS - Same as Active • R.FCAS - Zero MW 	<ul style="list-style-type: none"> • Energy - Zero MW • C.FCAS - Same as Active • R.FCAS - Zero MW
	NER 4.8.9 Directions	Same as other Scheduled resources	<ul style="list-style-type: none"> • Energy - AEMO can't issue Directions • C.FCAS - Same as Active • R.FCAS - Not applicable as they are not participating for this service 	<ul style="list-style-type: none"> • Energy - AEMO can't issue Directions • C.FCAS - Same as Active • R.FCAS - Not applicable as they are not participating for this service
	NER 4.8.9 Instructions	Same as other Scheduled resources	<ul style="list-style-type: none"> • Same as other Registered Participants 	<ul style="list-style-type: none"> • Same as other Registered Participants
	Telemetry data submission (Energy)	Depending on the VSR size: <5MW - Minimum 2 snapshots per TI >5MW - same as Scheduled resource i.e. 4 sec data	Depending on the VSR size: <5MW - Minimum 2 snapshots per TI >5MW - Same as Scheduled resource i.e. 4 sec data	No requirement for Telemetry data, but if Telemetry is voluntarily provided, it must meet the Power System Data Communication Standard.
	Settlements & Billing	Cost Recovery	Same as Scheduled resources	VSRs are not considered for NECR
Cross program Validation	RERT	<u>Cannot</u> participate in RERT	<u>Cannot</u> participate in RERT	<u>Can</u> participate in RERT



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