

24/03/2025

Ms Emily Brodie  
NEM Reform Project Lead, Australian Energy Market Operator  
C/- NEM Reform Team  
171 Collins Street, Melbourne  
3000 Victoria

Dear Ms Brodie,

### **Voluntary Scheduled Resources Guideline Consultation**

Thank you for the opportunity to participate in the Australian Energy Market Operator (AEMO)'s Consultation on AEMO's Voluntarily Scheduled Resources (VSR) Guideline.

SA Water is South Australia's leading provider of water and sewage services, providing regulated water and wastewater services to more than 1.7 million people throughout the state. Wholly owned by the Government of South Australia, we have been working to ensure a reliable supply of safe, clean water and a dependable sewerage system for more than 160 years.

To support the provision of regulated water and wastewater services, SA Water is one of the largest individual users of electricity in South Australia, operating facilities across more than 1,900 connection points across a wide spectrum of electricity loads.

Our unique position as an essential but flexible consumer of electricity has driven us to innovative approaches to securing a low-cost electricity supply over the last decade, resulting in SA Water becoming a full market customer in 2017. As such, we are now a leader in demand management and deliver significant cost reductions through scheduling our consumption of electricity at times when generation is abundant relative to demand, and prices are therefore low.

The VSR Guideline is a critical component of AEMO's implementation program for the Integrating Price-responsive resources rule change. It sets the ground rules for intending participants in the scheme, so there is a very real risk that if the Guideline is overly restrictive or does not provide sufficient clarity, there will be no or very limited uptake of VSR by industry. In making the rule, the Australian Energy Markets Commission (AEMC)'s final determination identified material benefits, exceeding \$1.4bn of direct cost reductions and a further \$12bn of avoided excess energy costs to consumers, which will all be at risk if the Guideline is not effective in enabling this uptake of VSR participation.

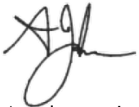
In drafting the Guideline, AEMO has an equally important role to balance this enablement and delivery of benefits against risks to the security and reliability of the National Energy Market (NEM). SA Water considers that the approach taken by AEMO in balancing these factors in the Guideline consultation is unclear and suggests that AEMO should include a section of the guideline explaining the risks to system security and reliability presented by VSR. We also suggest where controls that would potentially constrain participation in VSR are applied, AEMO should explain how effective those controls are in mitigating the identified risks to system security and reliability.

The consultation paper asked 38 questions spanning the breadth of the design and operation of the VSR Guideline, targeted at a range of respondents. Our responses to these questions, where applicable, are attached below in AEMO's requested format.

***In preparing our response to the consultation, SA Water has identified commercially sensitive information that we consider provides important context to AEMO in understanding our submission. We have included this information in a separate, confidential appendix to this letter and request that AEMO does not publish or disclose this confidential appendix to any person without SA Water's prior written consent.***

If you have any queries about this submission, please contact Mr Andrew Wilkins, Energy Markets Specialist at [andrew.wilkins@sawater.com.au](mailto:andrew.wilkins@sawater.com.au) or (08) 7424 1877. We welcome the opportunity to continue engagement with AEMO on this important market reform.

Kind regards,



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3.2	1. What should be the effective date of the VSR Guidelines?	<p>In addition to their role in supporting the entry of Voluntary Scheduled Resources in the market, the VSR Guidelines also form a critical input to participation in the incentive scheme. We believe an earlier effective date better recognises the importance to participants of having clear guidelines in place for designing systems and capabilities against and enables participants to prepare accurate tenders, leading to a higher level of participation in VSR. Having the guidelines take effect earlier will also allow participants to demonstrate compliance with guideline requirements ahead of the formal commencement of VSR so participation can commence from day 1. As such, SA Water suggests that the Guidelines ought to take effect ahead of the initial round of the incentive mechanism in April 2026.</p>
3.3	2. Do the proposals in this consultation paper strike the right balance between ease of participation for VSRs in central dispatch and the need to maintain a secure and reliable NEM power system?	<p>SA Water believes further context to AEMO's thinking in the scoping of the proposals in the consultation paper should be provided, along with more information on some proposals to help determine if the right balance is achieved.</p> <p>We note the inconsistency of the approach taken in balancing system security against ease of participation throughout the consultation paper, making it hard to determine if the right balance has been achieved. In many sections of the consultation paper, AEMO has emphasised concerns about risks to system security as warranting the need for offering less flexible approaches to managing VSRs for that component of the guideline. Yet in the section on conformance measures, the primary tool AEMO has to manage system security, AEMO's proposal is to effectively exempt all VSRs from non-conformance with dispatch instructions, with a commitment to follow up later with a letter to participants who are consistently non-conforming and possibly moving them from active to inactive mode – particularly notable because AEMO has proposed that for a participant to make this change of their own volition, the participant would have to provide 7 days notice. This implies AEMO has no concern about the effect VSRs can have on system security and reliability.</p>

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		<p>The incongruousness between these two viewpoints in the consultation paper does not provide confidence that a balance has been achieved in the proposed approach.</p> <p>We further note that the resources that would register for VSR on day one are already operating in the market as non-scheduled resources with no visibility on AEMO's part for their operations or ability for AEMO to control their actions, without undermining the reliability or system security of the NEM. This adds to our questions about whether AEMO has accurately articulated the level of risk VSRs pose to NEM system security and reliability.</p> <p>In drafting the guideline, SA Water suggests AEMO should include a section outlining what it perceives as the expected impact to system security of existing and new resources participating as VSRs, and the likely system security and reliability consequences to the network for them either being unable to receive sufficiently specific dispatch instructions relevant to the circumstances in the part of the grid where they operate, from them failing to or being incapable of conforming with the dispatch instructions that are issued, along with any other responses that AEMO deems relevant. We also suggest that for each measure in the Guideline where limits on VSR flexibility are recommended on the basis of providing for system security or reliability, AEMO should provide detail on the effective mitigation to those risks achieved by that measure and compares that with the impact to likely participation in VSR and delivery of the identified benefits of the rule.</p>
3.5	3. How appropriate is AEMO's proposed structure for the new VSR Guidelines?	The proposed structure of the VSR Guideline is logical and seems appropriate.
3.5.1	4. To what extent do you agree with all VSRs, independent of zone, being allocated a loss factor of one?	<p>While not opposed to AEMO's proposal for applying universal loss factors of one, SA Water supports approaches that maintain consistency of treatment between VSRs and other registered participation units through alignment between the Zone and loss calculations.</p> <p>For bidding, should a whole NEM region be initially used as a VSR Zone, it is logical to treat each VSR as if it operates at the Regional Reference Node and therefore also has a loss</p>

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		<p>factor of one. Should smaller VSR zones be used, a reference node for each zone could be identified, perhaps selected as a reference Transmission Connection Point for that zone, with the losses to that reference node then being used to apply a generic bidding loss factor for price.</p> <p>For energy settlement we agree with AEMO's proposal that loss factors should be applied for the constituent NMI on the basis that settlement is to occur at each NMI individually and not for the VSR DUID.</p>
	<p>5. Other than the NEM zonal classifications presented, what other zonal classifications could be appropriate to use as the basis of VSR zones? What are these and why would they be suitable?</p>	<p>It appears that AEMO has collated an extensive list of existing zone classifications. We are not aware of other existing alternatives to the sets of zones identified.</p> <p>The information included in this consultation for AEMO's proposed approach to zones is insufficient to establish suitability, in particular a geographical map alone does not provide sufficient resolution or explanation of zone boundaries for us to be able to agree to the suitability of the proposed choice of zones.</p> <p>Further comments are provided in our response to question 6 on considerations when dividing the NEM into zones, but as a general comment SA Water supports a philosophy of developing a consistent approach to defining zones rather than establishing a zone mechanism that is used solely for VSR.</p>
	<p>6. What are the key factors to consider when setting VSR zones now and in the future as the industry gains more experience with and information on dispatch mode?</p>	<p>AEMO's obligation under National Electricity Rule (NER) 3.10A.3.d.3 to "<i>apply restrictions on voluntarily scheduled resources in central dispatch only to the extent reasonably necessary for AEMO to manage power system security and reliability</i>" is a key consideration in all aspects of developing the Guideline, including defining VSR zones.</p> <p>SA Water agrees that after the rule obligation to facilitate participation, key factors are ensuring system security and integration into load forecasting.</p> <p>Where those considerations, relatively weighted, result in a need for a zone smaller than the NEM region to be utilised for VSR zones, SA Water believes that significant consideration should be given to designing fit</p>

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		<p>for purpose zones aligned to network topography rather than geographical location.</p> <p>The network to which an asset connects (i.e. Transmission vs Distribution vs embedded network) is a significant consideration in the challenges from congestion and system security, with the location of assets in the network being a material factor in the impact. For example, in the transmission network congestion challenges differ significantly from the distribution network and larger zones may therefore be viable.</p> <p>SA Water believes that a target state for NEM zones should be the establishment of a common approach to zoning in the NEM used by all participants, especially AEMO, TNSPs and DNSPs, to manage system security, congestion and other matters. We consider this view aligns with AEMO's identified factor of supporting future dynamic operating envelope integration but goes a step further in establishing consistent approaches to congestion management across all network levels.</p> <p>Consequently, we suggest that significant further work and consultation with industry on the design of a zone mechanism is needed and that the option to use NEM Regions as an interim solution for VSR zones is a pragmatic one.</p> <p>We do not support the proposed use of congestion modelling zones based on the information currently provided.</p>
	<p>7. How should VSR zones be set to balance cost and ease of participation for VSR with AEMO's need to manage power system security and reliability?</p> <p>a. What are your views on the potential use of NEM regions as VSR zones in the early years of dispatch mode when VSRs are expected to be small with a transition to VSR zones that better support system security as VSRs grow? In this scenario, what would the transition impacts be?</p> <p>b. What are the existing or potential issues with having an inconsistent approach to zonal classifications between VSRs and WDRUs?</p>	<p>AEMO has identified that larger zone sizes will better enable VSR aggregation to achieve the minimum unit sizes required, as per our response to question 6, SA Water supports the proposal to adopt a transitional arrangement that initially uses NEM regions for VSR with a potential future transition to a long term zone hierarchy to better support system security in the future, where appropriately justified. This approach would allow time for design and consultation with industry on long term zoning in the NEM.</p> <p>Given the above, while we support alignment between zone definitions for VSR and WDR from a philosophical perspective, we see limited additional benefit in forcing the alignment either in the short term or in lieu of</p>

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	<p>c. What impact/s do DNSPs see from the proposal to use congestion zones as the basis for VSR zones rather than distribution network boundaries?</p>	<p>defining a more holistic solution for zones that enables consistent management of congestion and system security.</p> <p>Question 7.c is not applicable.</p>
	<p>8. Does the selection of VSR zones impact your existing VPP portfolio?</p>	<p>The choice of zones would affect aggregation options within our portfolio which may result in some possible VSRs we are considering being unable to be offered.</p>
	<p>9. Do you currently have a VPP portfolio that operates across the NEM regions and/or distribution networks?</p>	<p>While we do not currently operate a VPP, our portfolio spans both the Distribution and Transmission networks within the South Australian NEM region.</p>
	<p>10. To what extent do you agree with the requirements, conditions and processes for VSRPs forming VSR aggregations within the proposed zones?</p>	<p>While not opposed to the process proposed, we consider that the approach is somewhat slow and cumbersome and would like to see further detail on the proposal to enable us to fully assess and comment on its suitability. SA Water would be keen for AEMO to include an exploration of the risk management achieved through the proposed process and whether it adequately achieves the balance between ease of participation and managing system security and reliability required by the rule.</p> <p>SA Water suggests that some of the issues with the responsiveness of the current proposal could be addressed if AEMO were better able to separate VSR creation and NMI nomination to a VSR, noting rule requirements that some criteria must be demonstrated as part of forming a VSR.</p> <p>A mechanism we believe warrants further consideration would be for AEMO to require pre-qualification of each NMI as being suitable to participate in a VSR prior to VSR nomination. This pre-qualification would include an assessment of each NMI to ensure it was meeting the required capabilities and demonstrating metering, assessment of the relevant zone and the maximum size of a VSR into which the NMI could be nominated, amongst other matters.</p> <p>This in turn allows a VSRP to form an empty VSR in a pending or even in hibernation mode after demonstrating the VSR specific capabilities and then nominate one or more pre-qualified NMIs using the more efficient Portfolio Management System approach that AEMO</p>

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		<p>has proposed for maintenance. Once the NMI pre-qualification and VSR capability demonstrations are complete, there would be a higher level of confidence that any VSR formed will be compliant, allowing for flexible management on the part of VSRPs.</p>
	<p>11. Do you agree with AEMO's minimum lead time of six months for a change in zones?</p>	<p>Noting that the six-month period follows an industry consultation process, this timeframe seems reasonable.</p>
<p><b>3.5.2</b></p>	<p>12. What other factors should be considered in setting the minimum VSR nameplate rating threshold and why?</p>	<p>It is unclear how reasonably necessary this measure is to manage system security and reliability, the primary obligation for AEMO to balance in setting the Guideline.</p> <p>SA Water would suggest that the minimum bid volume of 1MW sets the minimum possible VSR nameplate. In saying this, bidding a 1MW unit is highly restrictive in the ability to offer volume in only a single band and only in a single market, so a more pragmatic operational bidding volume may be higher.</p> <p>We also note that nameplate rating is often higher than the biddable volume that can be delivered as units often operate more efficiently than their nameplate, resulting in a higher nameplate being required to deliver the bidding volume.</p>
	<p>13. What are your views on an initial lower VSR nameplate rating threshold that adapts as dispatch mode capability and capacity grows?</p>	<p>We support application of a more flexible initial setting, allowing for the collection of evidence to inform future changes to the guideline, such as any interplay between nameplate size and VSR zones. SA Water is open to a solution that provides for the nameplate rating to be ratcheted up over time, however any identified need for ratcheting should be evidence based and in line with the rule.</p> <p>In a direct trade-off between larger initial zone sizes and smaller minimum nameplate ratings, we believe the lower VSR nameplate is the less preferable choice. As per our response to question 12, an initial mechanism providing a 1MW nameplate for a VSR would be restricted by the rule limitation requiring 1MW bid sizes and may therefore be of limited value or utilisation so a higher nameplate could be justified on a pragmatic basis, but other participants may have alternative considerations that SA Water has not considered.</p>



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	<p>14. What are the options for aggregations of &gt; 1 MW to participate in dispatch mode, given the 1 MW bidding threshold?</p>	<p>The practicality of 1MW bidding compared with actual unit capability is an issue that requires significant expansion in the Guideline.</p> <p>SA Water has identified a range of practical challenges with the 1MW bid size across responses to other questions that should be addressed in the Guidelines including:</p> <ul style="list-style-type: none"> <li>- The likely persistent gap between resources being aggregated not functioning in neat 1 MW units and the requirements for bidding and conformance with dispatch instructions</li> <li>- Delays for registration of NMIs in a VSR if the composition of available NMIs for registration an aggregated VSR is not a neat multiple of 1MW</li> <li>- The approach to management of conformance for a VSR if a NMI in that VSR is churned resulting in the VSR not having an exact multiple of 1MW of resources.</li> <li>- The mis-alignment between nameplate capacity and actual deliverable capacity resulting in the potential for a 1MW nameplate unit not being capable of being dispatched for 1MW of energy.</li> <li>- The practical need for registration of units greater than 1MW when participating in FCAS when the bid size is 1MW.</li> </ul> <p>Additionally, we see issues such as the proposed mechanism for telemetry aggregation by VSRPs could enable manipulation of the signal issued to AEMO to demonstrate exact conformance where actual dispatch is greater, e.g. picking the telemetry from a specific set of NMIs to forward that demonstrates conformance to exact dispatch instructions.</p> <p>Some of these issues could be addressed by setting rounding or truncation of signals, accepting small (&lt;1MW) variations between dispatch instructions and delivered capability as being conforming.</p>
	<p>15. Do you have any feedback you would like to provide on the nomination process for a VSR?</p>	<p>The nomination process outlined by AEMO suggests that AEMO anticipates high volumes of change in VSR composition across short periods of time, in no small part given AEMO</p>

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		<p>has outlined an intent to provide an API to facilitate the volume of anticipated submissions and manage the burden on participants.</p> <p>A solution based solely on use of the proposed API would require VSRPs to implement and operate a system to support submission of nominations, potentially increasing the cost of participating in a VSR.</p> <p>While SA Water is not opposed to this mechanism, so long as a web-portal interface is also provided, the dynamic nature of an API submission feels at odds with the system notice periods proposed and timeframes for AEMO to respond to.</p> <p>SA Water views the system would have a higher level of uptake if it is able to support more dynamic nominations process with more flexibility for participants, minimising the level of assessment that is required when a nomination to a VSR is made.</p> <p>One option that AEMO may consider is a full separation between VSR creation and NMI nomination to a VSR. This may involve registration of a VSR, nominating a zone in which it would operate, demonstration of VSR operational capability</p>
	<p>16. What issues do you see with AEMO's requirements for qualifying resources within a VSR or for a VSR?</p>	<p>The requirement that "poses no threat to maintaining power system security" while in line with AEMO's obligations is not specifically measurable and difficult to interpret for the purposes of determining what must be addressed for a VSR nomination to be successful.</p> <p>The requirement for VSRP should reflect the requirement for FRMP as these supersede some of the VSRP requirements. Potentially these categories could be combined.</p>
<p><b>3.5.3</b></p>	<p>17. Do you see any issues with AEMO's circumstances where it may request VSRPs that have aggregated qualifying resources to declare individual qualifying resource availability and operating status? What other factors should be considered?</p>	<p>This approach seems reasonable, however if the net result is to effectively split a single VSR into two or more VSRs, it may be preferable for AEMO to directly establish that mechanism.</p>
	<p>18. What are your views on the processes and settings AEMO should establish to</p>	<p>It is apparent that under the rule, AEMO would need to deal with such a circumstance and as</p>

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	<p>deal with cases of NMI churn resulting in a VSR dropping below the minimum threshold?</p>	<p>such a mechanism of this type is necessary. Adopting a lower minimum threshold reduces the likelihood and consequence of this concern.</p> <p>SA Water is concerned that an unrelated FRMP could accidentally disrupt the operation of an otherwise valid VSR by erroneously initiating a churn for a NMI for which they do not have customer permission, potentially resulting in the inactivation of an entire VSR if below the threshold. While customers must be free to churn to another retailer, this is an uncontrollable risk for the VSRP.</p> <p>If AEMO's proposed requirements for VSRs greater than 30MW are adopted, AEMO would also either need a similar process or would need to prevent the nomination of additional nameplate capacity exceeding the 30 MW threshold if at any time a NMI within a VSR does not meet the technical criteria to participate in a VSR of that size.</p>
<p><b>3.5.4</b></p>	<p>19. Are there any other matters AEMO should consider in relation to the proposed telemetry requirements?</p>	<p>While AEMO has outlined an expectation of telemetry provision by VSRs, it has only indicated that it expects immediate delivery of that data with no guidance on acceptable latency.</p> <p>The proposal for telemetry requirements appears inconsistent with the current structure and topography of telemetry for existing registered generators in the NEM. Under current arrangements, a SCADA feed from a single site is provided to exchange AGC and telemetry data with AEMO. SA Water is aware that multiple participants routinely report experiencing significant latency in receipt of AGC signals delivered to them by AEMO under this model.</p> <p>Under the model proposed for VSRs, the participant would require a telemetry solution to provide data to AEMO but would be responsible for aggregation of data to a single data stream for the VSR. This means that the VSRP would need to gather data from each site, collate the data in a single location including aggregation calculations and then forward the data to AEMO via the SCADA lite system. This likely results in the need for additional SCADA endpoints and puts an additional participant system between AEMO and the data feed. It also increases potential</p>

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		<p>cybersecurity risks by more heavily integrating the AEMO SCADA system with participant control and data systems.</p> <p>More critically for AEMO, it adds additional data hops into the communications path, given the existing latency challenges. The reverse issue then also occurs as VSRPs deliver an AGC signal to each site, further amplifying the existing challenges with AGC latency.</p>
	<p>20. To what extent does the proposed approach to telemetry appropriately balance between minimising barriers to VSR development and system security considerations?</p>	<p>Given AEMO's current proposal is to not apply any limits in real time to VSRs that are not conforming, SA Water suggests that telemetry via SCADA may be unnecessary and once again not consistent with the balance required for AEMO to establish under the rule.</p> <p>Instead, a daily aggregated telemetry delivery at 5s/60s frequency, as applicable, may be more appropriate. An alternative might also be to establish a new a higher performance grid metering requirement for VSRs and do away with any requirement for telemetry, such a solution may even be able to build upon existing RP/MP/MDP capabilities and avoid the need for establishing a costly telemetry pathway.</p>
	<p>21. To what extent do you agree with AEMO's proposed approach to the:</p> <ul style="list-style-type: none"> <li>a. Initial capability assessment?</li> <li>b. Periodic capability assessments, including any views you have on the triggers and frequency of such assessments?</li> <li>c. Operational requirements for telemetry and communications equipment for VSR?</li> </ul>	<p>SA Water has partially addressed this question in our response to question 10, particularly in relation to initial capability assessment.</p> <p>We believe that registration for FCAS should be a separate process to VSR nomination and capability assessment, that may result in a VSR registered for FCAS being exempted from some VSR capability assessment components due to an equal or higher standard being applied through holding a FCAS registration.</p> <p>SA Water believes that for VSRs that demonstrate conformance, limited periodic capability assessments (e.g. annual) would be appropriate. Where non-conformances have occurred, undertaking more detailed and event triggered capability assessments would be warranted. SA Water believes the settings for these capability assessments will need to be tested and potentially adjusted based on experience and the measured effect that VSRs have on system security and reliability.</p> <p>The recommended level of operational requirements for VSR should demonstrate a link</p>

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		<p>to providing a sufficient level of system security and reliability. SA Water is not opposed to the proposal if the link to these risks can be sufficiently demonstrated and the effective risk mitigation of these risks delivered by the proposed settings for the operational requirements can be demonstrated.</p>
<p><b>3.5.5</b></p>	<p>22. Do you agree with AEMO's notice periods for switching between VSR participation modes?                      a. Are you able to provide examples of how the proposed notice periods may impact your participation in IPRR?                      b. Are there any other considerations AEMO should include in setting its notice periods and information requirements?</p>	<p>We do not agree with the proposed notice periods for switching between inactive and active as they are far too long.</p> <p>Notice periods for switching to and from hibernation mode appear largely reasonable.</p>
	<p>23. Do you agree that VSR can only switch between modes on a per day basis, rather than per time intervals within the day?</p>	<p>SA Water does not agree with only having per-day mode switching. SA Water notes AEMO's identification that minimum active periods would be required and would seek to better understand the implications of these minimum periods.</p> <p>Under AEMO's current proposal, we struggle to see the difference in benefits for participants between inactive mode and hibernation modes and would suggest participants would always choose to default to entering hibernation mode if they anticipate a period of non-price responsiveness longer than 30 days.</p>
	<p>24. Do you agree with the notice information requirements that AEMO proposes?</p>	<p>We view that notices for deactivation and reactivation should be able to be submitted with bids to facilitate intra-day switching between active and inactive modes. As such, the information requests should be appropriately scaled to require reason codes only.</p> <p>The proposed information requirements for hibernation seem reasonable.</p>
<p><b>3.5.6</b></p>	<p>25. Do you have any suggestions on AEMO's plans to incorporate VSR bidding into its existing BDU bidding processes, or any other comments on AEMO's proposals for bid validation?</p>	<p>We support the proposal to use the BDU bidding mechanism, recognising that VSRs may be offered with a mix of generators, BDUs or loads, as a result all VSRs would utilise a single approach to bidding, regardless of their technology.</p>

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		<p>Given AEMO is proposing to utilise BDU bidding capability, we query if this means all intending FRMPs would need to transition their registrations to become an IRP to access those bidding structures? or whether the BDU bidding structure would be made available to Market load and Generator registration categories.</p>
<p><b>3.5.7</b></p>	<p>26. What information do you think it would be useful for AEMO to include in the Guidelines on NEMDE processes to support prospective VSRPs?</p>	<p>AEMO should identify any required information to enable technical limits for a range of technologies for the provision of energy services to be represented in NEMDE.</p> <p>Reference should be made in the guidelines to information for FCAS registration for any participants intending to register their VSR as FCAS providers, but specific VSR related FCAS details should be incorporated in the FCAS registration information.</p>
<p><b>3.5.8</b></p>	<p>27. Do you have any suggestions for how AEMO should update its processes to allow VSR to submit dispatch bids and receive dispatch instructions?</p>	<p>SA Water broadly supports AEMO maintaining consistent bidding and dispatch processes across the NEM. We expect that these processes should be routinely optimised to ensure they are fit for purpose given their centrality to the operation of the NEM.</p> <p>We query the value of requiring aggregated State of Charge information for a VSR, particularly where that VSR is an aggregation of multiple small units. If this information is unable to convey meaningful value, it should not be required.</p>
<p><b>3.5.9</b></p>	<p>28. To what extent does AEMO's proposed approach to dispatch conformance appropriately balance ease of participation with the secure operation of the power system?</p>	<p>Considering AEMO's repeatedly articulated concerns about the risk of VSRs to system security throughout the paper, this mechanism appears to more heavily favour ease of participation. While SA Water does not oppose this approach, it has led us to query the necessity of many other provisions requested for VSRs.</p>
	<p>29. What other factors should AEMO consider in setting dispatch conformance requirements and parameters?</p> <p>a. Do you have any views on what would be a reasonable error trigger to use in the context of the size of VSRs, or in how AEMO</p>	<p>Noting that many VSRs will be comprised of aggregated NMs that combine non-integer MW units to achieve an integer dispatch instruction, AEMO should evaluate conformance criteria to consider handling of consistent minor variances from the dispatch instructions.</p>

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	should approach setting this trigger?	
3.5.10	30. What are your views on the metering requirements proposed by AEMO for qualifying resources in a VSR?	<p>We note that AEMO also has requirements for provision of telemetry from each VSR unit at a sub 60s or 4s frequency for VSRs over 30MW or enrolled in FCAS. It is unclear whether this requirement can be met with sufficiently capable grid metering, or whether telemetry must be sourced and aggregated from other metering separate to the grid metering. Further clarification on these potential interactions would be of value.</p> <p>Otherwise, the proposed metering requirements appear reasonable.</p>
3.5.11	31. Is AEMO's explanation of the settlement and NECR arrangements for VSR across the participation modes useful information to be included in the VSR Guidelines?	<p>Yes, the information on energy settlements should be included in the Guidelines. The energy settlements information was something we needed to revisit and could potentially benefit from further explanation or reiteration.</p> <p>It would also be helpful to include the information on NECR arrangements in the guidelines or at least reference, noting this would need to be maintained as future reforms are delivered.</p>
3.5.12	32. Do you have any recommendations on the content or processes by which AEMO will adjust its prudential assessments for VSRPs and their VSR?	SA Water broadly supports the proposed approach.
3.5.13	33. What data do DNSPs, and where relevant TNSPs, reasonably believe they will require from VSRPs or AEMO and for what purpose/s?	Not applicable
	34. Do DNSPs/TNSPs have a preference for which AEMO system or process they receive data from, or are there alternative ways this data could be provided?	Not applicable
	35. From the prospective VSRP perspective, are there any privacy concerns related to the sharing of NMI within a VSR with DNSPs and where relevant TNSPs?	SA Water has not identified any privacy concerns with DNSPs and TNSPs (where relevant) having access to this information.
	36. What confidentiality concerns do you have regarding the disclosure of data	SA Water has not identified any confidentiality concerns with DNSPs and TNSPs (where relevant) having access to this information.

Section	Question	Comments
	<p>from VSRPs or AEMO with DNSPs and TNSPs (as applicable)?</p> <p>37. Do you see any issues with the other processes for the disclosure of data collected by AEMO from VSRPs to DNSPs and TNSPs (as applicable)?</p>	<p>SA Water notes that intending VSRPs may be connected to a market connection point on the transmission network or to an embedded network and that all references to engagement with DNSPs should be extended to include both TNSPs and Embedded network managers.</p>
3.6	38. Are there any other matters AEMO should consider as part of the development of the VSR Guidelines?	<p>We reiterate our concerns about the lack of consistency in the approach to balancing system security and reliability with ease of participation and encourage this to be more fully explored in the development of the VSR Guidelines.</p> <p>Much of the VSR Guideline feels as if it has been developed for a use-case around aggregation of consumer batteries. SA Water believes there is a wide technology mix that can participate in VSR and that benefits will be maximised if barriers, particularly the costs of this participation are reduced, particularly ongoing costs. We encourage AEMO to test its thinking on VSR against multiple technology mixes.</p>