

Starling Energy Group Pty Ltd  
ABN: 47 617 042 592  
Level 6 191 St Georges Terrace  
Perth, WA, 6000

Australian Energy Market Operator  
Level 22, 530 Collins Street  
Melbourne, VIC, 3000

**Re: Proposed design for a Visibility Framework**

Dear AEMO WA DER Team,

Starling Energy Group Pty Ltd (SEG) welcomes the opportunity to provide feedback on the Proposed design for a Visibility Framework Consultation Paper.

SEG provides integrated energy asset management services. SEG is committed to changing the future of the energy industry by switching to cleaner, greener energy solutions.

We believe a managed energy distribution grid is the future for the industry and it will become our major infrastructure asset, which is why we offer full lifecycle asset management. We oversee everything – from hardware and software to provider negotiations and customer service.

SEG is the creator of the Plico Project, the largest managed residential DER resource in the SWIS. In total, SEG has over 800 residential solar and battery systems under management, with over 5.7MW of residential solar PV deployed, complemented by 3.8MVA of inverter capacity and 7MWh of usable energy storage.

SEG has a deep interest in and understands the rationale for AEMO's proposed visibility framework. SEG offers its concise views on this in the context of what we intend to be able to achieve, the current framework and the roles and responsibilities of a future DER market as outlined by Energy Policy WA.

SEG would welcome direct communication with AEMO on our responses and any other matter relating to DERs.

Regards,



ROBBIE CAMPBELL

Robbie Campbell

CEO  
Starling Energy Group Pty Ltd

## Topic 1: Staged Implementation

Key questions	Further considerations
<p>Is the Visibility Framework, including a staged approach to its implementation reasonable, particularly in regard to the proposed timings of the stages, how the framework interacts with the Facility registration thresholds in each stage, and impacts or benefits to business models or VPP costs?</p>	<ul style="list-style-type: none"> <li>• In addition to the Visibility Framework’s key elements, what other things (i.e. obligations / requirements, prescription, documentation, processes or frameworks etc) are necessary to support the efficient and effective operation of the framework?</li> </ul>
	<ul style="list-style-type: none"> <li>• Is treating a VPP as very small (under 5 MW), small (at least 5 MW and less than 10 MW) or large (at least 10 MW) a reasonable approach to applying the Visibility Framework?</li> </ul>
	<ul style="list-style-type: none"> <li>• Will the proposal for Stage 3 for Facility registration in regard to the application of the 5 MW and 10 MW thresholds provide an effective measure in ensuring that off-market arrangements do not grow too large before they are made visible?</li> </ul>
	<ul style="list-style-type: none"> <li>• Do stakeholders have a view of how Facility Class should apply to VPPs?</li> </ul>
<p><b>SEG Response:</b>            SEG welcomes clarity on timelines and believes a staged implementation, with a review after each stage, to be a prudent approach.</p> <p>With regards to the thresholds of 5MW and 10MW, there may be a need for further clarity on the more detailed mechanics of its application. In the case of an aggregation of DERs in the premises of ‘non-contestable’ customers, as it currently stands, SEG would need to become a 3rd party aggregator and be required to partner with Synergy. This would also apply to other potential residential VPP operators in the SWIS, which would result in Synergy being the sole aggregator for ‘non-contestable’ customers, and Rule Participant, indeed, be required to comply with higher compliance (due to Facility Class) and visibility requirement due to the sum of MWs under management of the various 3rd party aggregators. This leaves open the possibility that the requirements of a 10MW VPP operator being cascaded down to small businesses that would not otherwise have crossed these thresholds. This may indeed increase barriers to entry. This may also blunt the intent of staged implementation as well as the rationale for varying visibility and regulatory requirements for different size VPPs.</p>	

## Topic 2: VPP Aggregation Guideline

Key questions	Further considerations
Will the matters to be covered in the VPP Aggregation Guideline provide sufficient clarity to VPP operators of whether they will be required to provide visibility data to AEMO?	<ul style="list-style-type: none"> <li>• Do stakeholders agree with AEMO’s proposed definition for a VPP and if not, what alternatives could be used?</li> </ul>
	<ul style="list-style-type: none"> <li>• What terms should be further clarified, or other terms explained, in the VPP Aggregation Guideline?</li> </ul>
	<ul style="list-style-type: none"> <li>• Are there other DER types or capabilities that should be included within the method for calculating a VPP’s estimated size?</li> </ul>
	<ul style="list-style-type: none"> <li>• How should the calculation of a VPP’s estimated size be made?</li> </ul>
<p><b>SEG Response:</b></p> <p>AEMO’s proposed definition of VPPs is as follows:            An aggregation of DER comprising at least 5 MW of DER of the type represented on the DER Register, located behind one or more Transmission Nodes and centrally controlled by a person via an orchestration system</p> <p>SEG’s view is more clarity be provided on ‘centrally controlled by a person’ as control of a VPP may be manual – by a person – or automatic, via an algorithm that individually optimises DER operation to maximise value to the customer. An algorithm may also be programmed to respond to market conditions as well as other market signals without human intervention. In the case of algorithmic optimisation of behind the meter DER for the sole benefit of the premises at which the DER is installed, SEG’s view is this should not be deemed a VPP regardless of size. Should AEMO require visibility of the behaviour at these NMIs, it should pursue a rule change to allow it access and visibility of interval data of non-contestable meters.</p> <p>Consideration should also be given to clarify the confluence of ‘centrally controlled’ and ‘orchestration system’. As it stands, the most common method of DER aggregation is via APIs to the ‘VPP cloud’ of the inverter and/or battery manufacturer. This means these particular ‘VPP enabled’ OEMs can technically centrally control their own brand’s inverter and/or batteries through their own systems – this is a prerequisite technical capability to enable their systems to be controlled via APIs by third parties. These OEMs should not be considered a VPP but may be caught by this definition.</p> <p>Keeping the above two points in mind, SEG proposes the following alteration to the definition:</p> <p>An aggregation of DER comprising at least 5 MW of DER of the type represented on the DER Register, located behind one or more Transmission Nodes and centrally controlled by a person via</p>	

an orchestration system for the purposes of active participation in the WEM and/or provision of services to the DMO and/or DSO.

On the subject of sizing, it is our understanding the DER register treats all DER equally, whereas, for the purposes of a VPP, it is SEGs view that VPPs be sized on installed and controllable capacity, in the case of PV + batteries, it would be only the inverter, whether it's AC coupled, or DC coupled. We note that controllable is key here as, at times, in AC coupled systems, while PV generation would be visible (via CTs), it may not be necessarily controllable to a VPP operator, either due to contractual or technical reasons. If it is controllable, then it should be included when sizing.

### Topic 3: Minimum Visibility Data Model

Key questions	Further considerations
<p>Is it reasonable for a Rule Participant (as the VPP operator) to provide data as per the Minimum Visibility Data Model or are there high costs and/or barriers to doing so?</p>	<ul style="list-style-type: none"> <li>• Is type of information suggested for collection as Static, Operational and Dynamic Information sufficient to provide a good indication of a VPP's physical characteristics and the VPP's intended activities?</li> </ul>
	<ul style="list-style-type: none"> <li>• What other type of information could be provided to facilitate visibility of a VPP and its intended activities?</li> </ul>
	<ul style="list-style-type: none"> <li>• Is AEMO's assumption that a VPP's Static data will change with greater frequency than data provided by a Registered Facility as Standing Data correct?</li> </ul>
	<ul style="list-style-type: none"> <li>• Is the proposed requirement to update Minimum Visibility Data, in regard of the update frequency, reasonable?</li> </ul>
<p><b>SEG Response:</b></p> <p>AEMO's proposed data requirements seem reasonable.</p> <p>SEG would like further clarification from AEMO on the definition of 'real time'. A specific sampling rate would be useful to work towards – even if it's an acceptable range. SEG would also encourage AEMO to consider the current capabilities of inverter OEMs, many of whom are able to provide between 1-minute to 5-minute granularity. It is likely, a sampling rate faster than this will require additional costs not currently factored into the running of VPPs.</p>	

## Topic 4: Use of visibility data

Key questions	Further considerations
Do you agree with AEMO's proposed uses of the Minimum Visibility Data for energy system and market development, forecasting and operational planning, and evolving the Visibility Framework and DER Register?	<ul style="list-style-type: none"> <li>• Is the use of data collected for the DER Register to complete VPP characteristic information a suitable use of DER Register data?</li> </ul>
	<ul style="list-style-type: none"> <li>• Should the DER Register be used in future to hold Minimum Visibility Data - Static data?</li> </ul>
	<ul style="list-style-type: none"> <li>• Do you agree with AEMO's proposed uses of the Minimum Visibility Data for energy system and market development, forecasting and operational planning, and evolving the Visibility Framework and DER Register?</li> </ul>
	<ul style="list-style-type: none"> <li>• What other uses might there be for Minimum Visibility Data?</li> </ul>
<p><b>SEG Response:</b></p> <p>SEG believes that in order for AEMO to function effectively as a DMO, rich data from DERs will be required to make informed decisions. The Minimum Visibility Data is a solid foundation, assuming clarity around the issues raised in previous questions is provided.</p> <p>SEG does not believe using the DER register for holding static data is suitable, as inevitably, some of these data points will change as more VPP offerings come onto the market. It may be less onerous, at least at the start, to keep the DER register as is. At least at the start, it may be less onerous</p>	

## Topic 5: Publication of visibility data

Key questions	Further considerations
What data collected in accordance with the Minimum Visibility Data Model should be published as part of market data, and what data should be confidential?	<ul style="list-style-type: none"> <li>• Should Minimum Visibility Data be published as part of market data?</li> </ul>
	<ul style="list-style-type: none"> <li>• If so, what data would be of most benefit to Rule Participants to publish?</li> </ul>
	<ul style="list-style-type: none"> <li>• What information should be kept confidential?</li> </ul>
<p><b>SEG Response:</b></p> <p>SEG believes that a future DER energy market will be very heavily data driven and would welcome Minimum Visibility Data being published as part of market data. Operational and Dynamic data would be useful to the market as well as VPP estimated size and service type. The remainder of Static data should remain confidential.</p>	