



## Department of Environment, Land, Water and Planning

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Chief Operating Officer  
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“\*MBR045693\*”

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Dear Mr Gatt

### **AMENDMENT OF THE MARKET ANCILLARY SERVICE SPECIFICATION – DER CONSULTATION**

Thank you for the opportunity to make a submission on behalf of the Victorian Government to the Australian Energy Market Operator's (AEMO) *Amendment of the Market Ancillary Service Specification (MASS) – DER Consultation* draft report and determination. The Victorian Government appreciates AEMO's efforts as part of its National Electricity Market (NEM) Distributed Energy Resources (DER) Program, including its Virtual Power Plant (VPP) Demonstrations and Project EDGE, geared towards building a more resilient grid for energy users across Australia. The Victorian Government also appreciates AEMO's openness to engage in consultation with stakeholders on potential amendments to the MASS.

The Victorian Government's key policy priorities include energy security and reliability, energy affordability, delivery of the Solar Homes Program, the Energy Fairness Plan, and achieving greenhouse gas emissions reduction and renewable energy targets. Victorian energy consumers are investing rapidly in DER to save money on their bills and to generate, consume and share clean energy.

The Victorian Government's \$1.3 billion, 10-year Solar Homes Program provides rebates and interest-free loans to help 778,500 Victorian households reduce the upfront costs of installing a solar photovoltaic, hot water or battery system at home. Launched on 1 July 2019, the Solar Homes battery rebate stream is supporting 18,500 households to install 'VPP-ready' battery systems. Solar Victoria has been working to deliver an expanded battery program, offering Victorian consumers the opportunity to participate in Solar Homes approved battery aggregation initiatives. The objectives of the expanded rebate program are to broaden the benefits to the Victorian public by adding an option for households to participate in aggregation and drive industry innovation in battery grid stability services, further supporting Victoria's transition to a renewable energy future.

The Victorian Government recognises AEMO's role is to manage the system security and reliability of the NEM. We strongly support this objective and acknowledge AEMO must be satisfied that aggregated DER participation in frequency control ancillary services (FCAS) maintains a secure and reliable power system. However, our view is that the draft determination could have unintended longer term impacts that may not have been fully incorporated into the analysis. The Victorian Government encourages AEMO to consider how its current MASS draft determination could be revised to ensure we continue to adapt to unprecedented changes to consumer preferences and our energy supply mix, without compromising system security.

### **DER participation in ancillary services markets is key to addressing system security issues and capturing the value of DER for all energy users**

AEMO's 2020 Integrated System Plan notes DER generation capacity across the NEM could double or even triple by 2040, holding grid demand relatively constant. Based on data from the Clean Energy

Regulator, there are now more than 554,000 small-scale solar installations in Victoria, and residential rooftop solar capacity is forecast to increase 400 per cent from 2020 to 2050.

Battery storage will become a key part of the electricity system going forward, as they can provide a wide range of social, economic, and technical benefits. Depending on the battery type, these benefits include network support, renewable energy integration, provision of wholesale energy and ancillary services, reliability in outage prone areas and virtual storage services for customers. Battery aggregation offers a competitive alternative to services from larger resources, with the added benefit of encouraging energy users to make decisions which support the stable operation of the electricity system. Realisation of these benefits will often depend on the effective integration of batteries in ancillary services markets, as FCAS is a primary revenue stream for many batteries.

VPPs are an important vehicle to encourage households and other small energy users to install active DER. If designed appropriately, VPPs can help gain consumer trust and willingness to participate in markets, delivering benefits to both energy users and the electricity system. Without this trust, and opportunities for participation, there is a risk that energy users will be locked out of the system's transformation and will be increasingly penalised for seeking to maximise their own utility, rather than being incentivised to become an integral part of the solution. AEMO's draft determination may make it more costly for DER to deliver FCAS, and may create barriers to VPP development, viability and market entry; thereby reducing both the value generated for customers and choice in the way they use energy, as well as benefits to the broader market.

AEMO has raised system security issues related to increasing DER uptake, such as falling minimum demand. AEMO has also noted the importance of DER visibility to its operations. The Victorian Government is concerned that the MASS draft determination could work against this objective, by reducing incentives for batteries (and potentially other forms of DER) to become visible and 'behave' in ways that benefit the energy system. Furthermore, with proposed changes such as AEMO's 'backstop mechanism', there is an increasing need to offer opportunities for consumers to become part of the solution.

The Victorian Government agrees security should not be compromised but encourages AEMO to consider undertaking a more comprehensive and transparent analysis of the costs and benefits of its draft determination. This could include, for example, consideration of the severity of power system risks, versus the potential short and longer-term impacts of reduced VPP participation on system security or reduced competition in ancillary services markets. Further consideration could also be given to how the draft decision could affect business confidence and investment sentiment for VPPs.

The Victorian Government also encourages AEMO to consider whether this decision could result in an unequal treatment of large and small generation. FCAS requirements were not originally developed with the capabilities of DER in mind. In recognition of this, measurement standards should evolve, where required, to reflect changes in technology mix and harness the value of DER for customers and the broader market. Making DER adhere to the same measurement standards as large generators, without recognition of the higher relative cost, could result in inequitable treatment of large and small systems.

### **A roadmap with clear milestones would help provide confidence on AEMO's strategic intention to effectively integrate DER into markets**

System reliability and security is a key priority for the Victorian Government. As renewable energy comes online and thermal generators retire, the electricity system will need to evolve to meet sudden

changes in generation. DER offer a unique opportunity to manage some of these challenges, but this is subject to the right market and regulatory conditions.

The Victorian Government's view is that if AEMO were to maintain the requirements in its draft determination, it should also provide industry with confidence that it has an intention to support DER market participation in a timely manner. While it is recognised that there are unresolved questions, such as the underlying power security issues posed by inverter behaviour and the impacts of measurement accuracy, more work is required to fully understand these issues.

While the Victorian Government supports AEMO's proposal to establish a Consultative Forum to progress issues related to market ancillary services and DER inverter behaviour, the final determination would benefit from more clarity on the way forward. The Victorian Government encourages AEMO to consider publishing a roadmap for DER participation in FCAS, or ideally, a broader pathway to integrate DER into its energy and other ancillary services markets, such as the upcoming fast frequency response market ancillary services. This roadmap could outline what further work needs to be undertaken to have confidence in inverter behaviour, as well as what interim arrangements could be put in place, and include a commitment to reconsider amendments to the MASS if supported by findings. The roadmap could also consider the impacts of emerging technology, such as dynamic operating envelopes, which can support DER market participation within network limits. Critically, the roadmap ought to include clear milestones, which provide industry confidence on the timing of next steps.

In parallel, AEMO could consider a transition period for aggregators outside of the VPP trial. This could be supported by an accuracy penalty and require VPPs to meet stricter requirements over time. It could also seek to 'meet industry in the middle', for example, by relaxing some of the conditions of the MASS while not completely mirroring requirements in its VPP Demonstrations.

### **The Victorian Government's Solar Homes Program Battery Aggregation Pilot could be used to further test DER participation in ancillary services markets with the right protections**

Solar Victoria has allocated 2,000 battery rebates over the 2021-22 financial year to support consumer participation in approved battery aggregation projects. From early 2020 Solar Victoria has undertaken extensive market research and engagement to inform the program's design, which will encourage technology and market innovation, while creating additional value for Victorian consumers and the broader community.

The pilot program was officially launched in April 2021 with an Expression of Interest (EOI) process that closed on 14 June 2021, before AEMO released its draft determination, which received keen interest from small and large industry players.

The Victorian Government is concerned that AEMO's draft determination would have unintended consequences on the types of projects that could be trialled under the program, impacting its viability as well as the delivery of key Victorian Government objectives. For example, the current requirements make it more expensive for VPPs to participate in certain FCAS markets. Many aggregators rely on 'value stacking' to make their service offerings attractive to energy users and financially viable, and FCAS is a key component of this value.

The Victorian Government requests AEMO to allow Solar Victoria's aggregation pilot program to have the same conditions as the VPP Demonstrations for a transition period. The Victorian Government also encourages AEMO to consider whether other pilots in the short term could be subject to a transition period. This would allow pilot projects to make the transition to MASS requirements over time, without impacting DER innovation. These trials could deliver mutual benefits by informing some of the questions raised in the MASS draft determination, for example studying the impact of different

measurement sampling rates, measurement locations or the effect of system disturbances. In the case of Solar Victoria's pilot program, the Department of Environment, Land, Water and Planning (DELWP) would also collaborate with AEMO to set appropriate safeguards, which could include knowledge sharing, accuracy discounts, or specific technical requirements.

Thank you again for the opportunity to provide input into AEMO's draft report and determination. If you would like to discuss any of the issues raised in this submission further, please contact Ralph Griffiths, Executive Director, Energy Strategy, DELWP, on 0438 175 058 or by email at [ralph.griffiths@delwp.vic.gov.au](mailto:ralph.griffiths@delwp.vic.gov.au).

Yours sincerely



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