

25 June 2020

Australian Energy Market Operator  
GPO Box 2008  
MELBOURNE VIC 3001

**Email: [FutureEnergy@aemo.com.au](mailto:FutureEnergy@aemo.com.au)**

Dear Sir/Madam,

**AEMO Renewable Integration Study: Stage 1 Report, April 2020**

**Background to Enova**

Enova Community Energy (Enova) is Australia's first community owned energy retailer. We established as a social enterprise in order to build self-sustaining and resilient communities through locally generated and shared renewable energy; to assist communities to make the transition to renewable energy without leaving anyone behind; to keep jobs and profits in local communities; and to reduce carbon emissions.

**Our Position as Stakeholder regarding the Report Stage 1**

We congratulate AEMO on the essential work it is carrying out to "identify futures for the NEM that maximise consumer benefits at the lowest system cost while meeting reliability, security, and emissions expectations. We also applaud the recognition that "the NEM's least cost future features large increases in renewable generation" including distributed solar photovoltaics (DPV) installed by households and businesses as a significant and growing part of the mix. We also recognise the need to identify action to be taken to ensure the NEM can be operated securely at up to 75% instantaneous penetration of wind and solar by 2025.

Because we see our stakeholder role as one of facilitating community uptake of renewable energies in such a way that maximum benefits are returned to communities we wish in this submission to focus on the challenges and recommended actions outlined in Chapter 3 : Managing the system impact of the NEM's world-leading and growing levels of distributed solar PV, and the Report's Appendix 1.

### Case re: Need for Modification of Approach in Section 3

We note the report's comments re the "**passive** nature of the majority of the DPV fleet": that low levels of penetration is not a problem, but that as penetration increases, firstly issues of voltage management arise in the distribution network; then with further growth the distribution-transmission interface is affected; and ultimately once penetration is significant at the NEM regional level (noting that "region" is effectively a state, in terms of the report), it impacts all core duties of the power system operator. (Appendix 1 p.14). We appreciate the need to ensure standards for technical requirements for inverters and other DER devices are clarified and upgraded (essentially Actions 3.1, 3.2, and 3.3). We also appreciate the need for increased visibility of LV systems and encourage actions to develop that capacity in DNSPs.

However, we note that all further actions proposed in Section 3, i.e. those to do with "generation shedding capability" assume the continued growth in penetration of largely passive solar PV. This is despite acknowledging that other parallel studies are being carried out addressing the impact of the development not only of distributed (and large scale) energy storage, demand side participation and energy efficiency, but also the development of alternative renewable technologies, such as bio-energy and pumped hydro, and hydrogen.

In other words the Report has gone on to assume that in order to be ready to manage the impacts of rapidly increasing DER, action has to be taken to enable centralised organised, operator or technically imposed limits on such passive DER.

So, we see in 3.4 and 3.5 the actions proposed are to 'collaborate with industry' to 'establish regulatory arrangements' for how network service providers could implement 'minimum device level requirements...to enable generation shedding capabilities'; and to 'investigate the need for updating the existing DPV fleet to comply with regional generation shedding requirements'. These actions are stated as necessary even though "Harnessing load and storage flexibility may reduce the amount of...generation shedding necessary".

As a community scale energy retailer focussed on working with communities, and with a customer base which is already 60% solar PV enabled, we would like to see more recognition of (and support for) the results that can be achieved through the development of sub-regional (in AEMO's terms) self-sufficiency including storage i.e. enabling regions **within** states to move to near complete self-sufficiency. We do advocate for communities maintaining grid connectivity for reliability and security of supply.

We recognise that large scale energy generation is required to sustain our growing domestic market and export markets, however, increasing DER can result in increased resilience in metropolitan and regional areas.

So, for example, we would argue that sub-regions e.g. the Northern Rivers of NSW, could be developed, in which streets and small towns share storage; embedded networks, microgrids and virtual power plants operate; energy efficiency and demand management technologies are effectively implemented; local investors own community generation assets; and hospitals, airports and local industry are served with local generation and storage (with whatever appropriate combination of pumped hydro, solar, wind, hydrogen and bioenergy).

Not only is this possible, such sub-regions (or localities) offer more energy security and create stronger local economies. An Australia in which sub-regional economies can operate in this way needs to invest less in large scale transmission, and large scale generation plants of any description. By localising generation and storage, less emphasis needs to be placed on transmission needs, and distributors can work within communities to ensure plans can be managed within sub-regions and don't impact on load at the regional level.

The development of SMART cities making use of all aspects of DER is a variant on this, and again, by investing in and assisting the development of technologies that work at the domestic scale, a rapid transformation of energy use, and reduction in emissions can be achieved.

Our argument is that by **fast tracking actions concerning regulatory arrangements currently stalling the development of community scale projects** (such as micro-grids, solar gardens, shared renewables and shared storage), which are required to enable self-sustaining communities and SMART cities, AEMO could facilitate the development of increasing quantities of DER without jeopardising the stability and security of the grid.

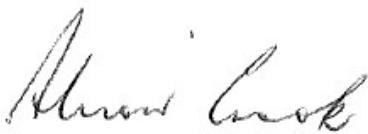
With a regulatory environment which allowed retailers to effectively engage with and reward prosumers there would be rapid developments of projects involving production and consumption within limited geographic areas.

Distributors would then have reason to work with retailers and local communities to solve for issues at the sub-regional level, and participate in community storage projects to reduce unnecessary CAPEX. Additionally, with a greater focus on supporting and investing in community scale projects, and developing more circular economies, we would see a genuine reduction in energy costs to households and SME's, together with stronger and more resilient rural and regional economies requiring less government support to deal with a rapidly changing environment.

**In summary**, our case is that rather than seeking to implement actions required to control and curtail passive solar in the near term future, as penetration increases, **AEMO should act to facilitate individuals in communities taking control of their power and shifting from a passive**

**to an active approach.** We acknowledge the narrow focus of the RIS Stage 1, but put the case that if rather than pushing increasingly towards regulatory arrangements for load shedding, AEMO pushed for regulatory arrangements to encourage energy sharing at local levels, this would:

- Take pressure off the grid, and considerably reduce the need for expenditure on large scale transmission.
- Maintain energy reliability in Australia's regions and significantly increase energy security and resilience in the case of natural disasters.
- Strengthen local economies by reducing the funds flowing from regions on people's energy bills and by creating significant numbers of jobs in local regions.
- Create regionally based and owned distributed energy solutions making use of the most environmentally appropriate solutions for different regions.
- And it would genuinely reduce costs to households by enabling them to be active participants in the shift to renewables, rather than passive recipients of some purported long term reduction in prices resulting from large companies passing through cost reductions arising from their large scale renewable industries.



Alison Crook,  
Chair



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