

Submission to: Australian Energy Market Commission (AEMC)

For: **AEMC draft determination / reform proposal to better integrate distributed energy sources into the electricity grid.**

From: Kaylene Allan, Angela McGowan and Ahmet Bektas. 12 Saunders Crescent, South Hobart, Tasmania

1. Background to our submission

The authors of this submission are members of a small co-housing community in Tasmania, which operates under the *Strata Titles Act 1998*. One of the few co-housing communities in Australia, Cascade Cohousing provides a mix of private and shared living spaces to meet the need for both privacy and a sense of community. Established in 1991, Cascade Cohousing comprises 14 shares and houses young families through to retirees. The common property is managed by the body corporate and includes a central common house; community gardens and bush; playground and recreational spaces; and car parks. Sustainability and community are core values of our community. We aim to provide a high quality of life with the resilience and flexibility to adapt to change in a dynamic and uncertain world.

A key aim of many residents is to live a comfortable and sustainable lifestyle, sharing more and living in efficient homes that harness renewable energy. Our physical infrastructure is underpinned by smart passive solar design which considers the embodied & ecological costs of building, transport and materials; modest house size and efficient use of localised renewable energy, water and on-site reuse systems.

The authors and most residents see it as our responsibility to play our part in decarbonising the electricity sector as part of combatting the climate emergency. In turn, any investment and savings we make will support local economies and innovation contributing to more resilient communities (including through energy security and community empowerment). Furthermore, our co-housing community and energy systems offer an alternative living model and education opportunities for the broader community.

To date 8 of our 14 owners have installed a total 13.5 Kw of rooftop solar. Most systems are 1-2 Kw. We have a single electricity connection to the grid, and excess solar power is first consumed by other households within the cohousing connection. One resident has an electric car, which is usually charged at home during the day. In the past year 14.3 Mwh of solar power were generated, of which 9.6 Mwh was consumed internally and 4.7 Mwh was exported to the grid.

Given our size, housing and site design, management and demographics there is significant potential for additional on-site solar power generation.

A recent survey of our community members found that of 16 households seven are planning to purchase an electric vehicle within five years and another six households would consider purchasing one when they become more affordable.

2. Feedback on the AEMC reform proposal

It is both a critical and exciting time for the electricity sector in Australia – we are facing a major climate crisis and Australia’s energy system is our largest domestic source of greenhouse gas emissions. At the same time, there is rapid growth in the development, innovation and affordability of renewable technologies. The way we generate, consume and manage power is dramatically changing and the current centralised system is no longer fit for purpose.

Alarmed at the risks of the climate crisis and of Australia’s high per capita contributions, and empowered by innovative solutions, communities like ours want a fair system for generating, using, storing, sharing and selling clean energy. The successful and fair integration of distributed energy sources is vital to achieving this.

In our view the primary objectives of any reforms to National Electricity Rules should be to encourage a swift reduction in greenhouse emissions both in electricity generation and, through electric vehicle charging, in transport.

Reforms must also fairly balance both the cost of supporting distributed energy resources with the return on their benefits. By focussing on the cost, these proposed rules will be seen to benefit only the network providers and generate widespread community opposition. How can the reforms appear to be fair when it proposes charging families to export their clean energy to the grid but allows coal-fired generators free access to the grid?

We believe those who generate renewable electricity should not be penalised or disincentivised in any way. We instead strongly support incentives to promote household and community solar generation and management. This includes supporting households install home batteries and electric vehicle chargers, and for groups of houses or neighbourhoods to set up micro-grids with shared electricity generation and storage infrastructure.

The current pricing, financial and regulatory frameworks and distribution services do not provide the incentive and certainty for communities, such as our cohousing, to optimally invest and maximise our contribution to the renewable energy sector. With support to make home batteries a financially viable option, a community such as ours could better use the electricity we generate and minimise export to the grid.

There are of course a range of other structural changes needed to support the development and integration of distributed energy sources, such as a national renewable energy policy and targets, complementary regulation of energy markets and investment in community education, trials and joint ventures etc.

We support:

- the reforms which address the current blockages and inefficiencies to community involvement.
- incentives for communities to integrate on-site solar energy generation, electric cars and the electricity grid.
- incentives for households to reduce reliance on fossil fuels by installing solar panels and switching to electric vehicles.

Supported by ARENA, a trial is currently underway in Canberra to test the capabilities of integrating electric vehicles (with bidirectional chargers) into the grid. The aim is to test if it can improve the energy network's stability particularly at peak times and to help identify the pricing mechanisms required to facilitate the two-way flow of energy.

We are opposed to:

- any rule changes that remove the current prohibition on networks to charge for energy exported to the grid by households and communities. This proposal is extremely counter-productive to encouraging everyone to use renewable energy and work towards eliminating fossil fuels. It will add additional uncertainty and expense for those who are already spending funds on installing solar panels. Instead, if the networks want to discourage people from exporting excess power to the grid, they should subsidise or even provide batteries to households.
- the lack of a proposal to charge those who produce electricity using fossil fuels for supplying their electricity to the grid.

We thank you for the opportunity to provide input.

Caveat: This submission has been prepared by the authors. Although it draws on and describes their experience as members of a cohousing community in Tasmania, this submission has not been considered or endorsed by Cascade Cohousing.