

Submission in response to the AEMC's draft report on the review of regulatory arrangements for embedded networks

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About CEEM

The UNSW Centre for Energy and Environmental Markets (CEEM) undertakes interdisciplinary research in the design, analysis and performance monitoring of energy and environmental markets and their associated policy frameworks. CEEM brings together UNSW researchers from the Australian School of Business, the Faculty of Engineering, the Institute of Environmental Studies, the Faculty of Arts and Social Sciences and the Faculty of Law, working alongside a number of Australian and International partners.

CEEM's research focuses on the challenges and opportunities of clean energy transition within market oriented electricity industries. Key aspects of this transition are the integration of large-scale renewable technologies and distributed energy technologies – generation, storage and 'smart' loads – into the electricity industry. Facilitating this integration requires appropriate spot, ancillary and forward wholesale electricity markets, retail markets, monopoly network regulation and broader energy and climate policies.

CEEM has been undertaking research into these challenges for more than a decade, with a focus on the design of markets and regulatory frameworks within the Australian National Electricity Market, and State and Federal energy and climate policy. More details of this work can be found at the Centre website – www.ceem.unsw.edu.au. We welcome comments, suggestions and corrections on this submission, and all our work in the area. Please contact Associate Professor Iain MacGill, Joint Director of the Centre at i.macgill@unsw.edu.au.

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About APVI

The Australian Photovoltaic Institute (APVI) comprises companies, agencies, individuals and academics with an interest in solar energy research, technology, manufacturing, systems, policies, programs and projects.

Our objective is to ***Support the increased development and use of PV via research, analysis and information.***

The APVI prepares Australia's Annual PV in Australia Report and contributes PV related statistics to the International Energy Agency and provides analysis to industry, regulators and government on a range of technical and policy related issues.

A detailed summary of our projects can be sourced at our website www.apvi.org.au some relevant projects and reports include:

- Australian PV System Monitoring Guide;
- Best Practice Guidelines for Local Government Approval of (Solar) PV;
- Interactive Australian PV solar Mapping Resource including PV capacity at a Local Government Area level;
- PV Fault Reporting Website;
- Impacts of PV, AC and other Technologies and Tariffs on Consumer Costs;
- High Penetration of Photovoltaic Systems in Electricity Grids;
- Magnetic Island High Penetration Case Study;
- Carnarvon High Penetration PV Study Report;
- Alice Springs High Penetration PV Study Report
- PV Integration on Australian Distribution Networks: Literature Review

Introduction

We welcome the opportunity to make a further submission to the AEMC's review of regulatory arrangements for embedded networks. We do not respond to every detail of the report, rather we provide a brief response to the central approach outlined in the Draft Report, along with our views on the key stakeholder questions identified.

We agree with the Commission that *'embedded networks can provide benefits to consumers by way of discounted prices and non-price benefits such as multi-service offerings, more environmentally sustainable housing and improved access to embedded generation.'* As we outlined in our earlier submission to the review, embedded networks are one of the tools that may be used by groups of consumers to facilitate shared use of distributed resources such as generation and storage, as well as to strengthen their bidding position in the evolving energy market. We voiced our concern that the administrative complexity and stringent criteria of the current retail and embedded network exemption process inhibits groups of consumers co-ordinating their engagement in the market and may serve to strengthen the dominance of incumbent retailers at the expense of innovative business models.

The AEMC's draft report recommendations stress the importance of improving access to retail competition. The value of this depends, of course, on the effectiveness of such competition. The AEMC's annual reviews of competition present a rather positive view on this matter, finding in its 2016 Review that *"competition remains effective for retail electricity and gas markets in New South Wales, Victoria and South Australia, and for the electricity market in South East Queensland"*, while its 2017 Review finds 'stable' or 'improving' trends across all its measures of electricity competition, other than 'varied' for retailer margins.

We have a different perspective on present retail arrangements which in our view offer only limited engagement opportunities for energy users and hence *"The growth in popularity of embedded networks should be seen in the context of the ongoing transformation of the Australian electricity market from a largely centralised generation grid to a more decentralised network, with increasing demand-side participation (DSP) as organisations, communities and individual consumers deploy diverse technologies - including distributed generation, storage and demand response – to help meet their energy needs."* Of particular relevance to embedded networks, *"many options for demand side participation require significant co-ordination between consumers and support from third parties to facilitate engagement and maximise value, in what is a highly complex 'designer' market with major asymmetries between supply and demand arrangements. Embedded networks are one potential mechanism to facilitate this co-ordination."* As such, *"The presumption that embedded networks are inherently anti-competitive may, perversely, do more to protect the interests of some industry incumbents than consumers themselves. After all, if energy users aren't able to collectively organise themselves to better provide their energy services, much of the inevitable collective decision making required in the electricity industry will have to remain exclusively with existing industry players."*

The recent ACCC Retail Electricity Pricing Inquiry Preliminary Report would seem to support some of our concerns while taking a rather different view on the present effectiveness of retail competition to that of the AEMC. The ACCC notes that *"retail electricity markets in the NEM remain very concentrated"* and that *"one sign that competition has so far failed to meaningfully challenge the large retailers is limited erosion of their market shares in the past five years."* Meanwhile, *"the move to dispersed pricing has not corresponded with different products or services or significant product innovation to date" while retail costs increased around 50% in real terms between 2007-8 and 2015-16 and gross retail margins accounted for 24% of the residential bill on average."*

Of particular relevance to embedded networks, the ACCC identifies a range of factors that are limiting the ability of smaller retailers to compete including vertical integration of the large gentailers, yet also the market behaviour of established retailers, particularly to either 'save' a customer who has signed up with an alternative retailer, or to win the customer back a short time after they have switched. This is

often done through off-market offers better than any they advertise to consumers. Such strategies, of course, end up being paid for by these retailers' other customers.

In our view the ACCC findings highlight the potential value of facilitating other methods of consumer engagement in the retail market including through embedded networks. Whilst we agree that some exempt customers have been badly served by exempt retailers and embedded network operators under the current arrangements, we do not agree with the Commission's view that these issues can only be resolved through abolishing the exemption framework. Importantly, the Commission states that its recommendations *'are not intended to create a barrier to the continued operation and establishment of embedded networks where they offer benefits to consumers,'* but we are concerned that removal of the exemption framework may do just that.

Notwithstanding any additional flexibility in the authorisation process, it is at least likely that application for retail authorisation and embedded network registration will incur a greater administrative and financial cost than applying for exemptions under the current arrangements. Although the new arrangements may encourage more existing electricity retailers to compete in the provision of embedded networks, coming on the heels of the (as yet unknown) additional expense of appointing an Embedded Network Manager, these increased compliance costs are likely to adversely affect small operators and may drive them from the market, perversely reducing competition. The Commission's stated aim of moving the focus from businesses to consumers may in fact inadvertently shift the focus from small businesses to larger ones. Given the recent increases in retail energy prices for on-market customers, it is by no means self-evident that the presence of multiple large electricity retailers in the EN market will drive down bills.

There is currently a diversity of business models available to, for example, a residential Owners Corporation setting up an Embedded Network, allowing them to take on varying degrees of the risks (and associated benefits) of the network. If the move to full retailer authorisation eliminates smaller operators from the market, it is likely to also reduce the range of business models available and discourage innovation.

Indeed, the ACCC report appears to suggest that innovative retail offerings built around embedded networks may need some form of protection from predatory behaviour by large retailers to expand market share, subsidised by their other customers who aren't actively participating in their energy service arrangements.

The Commission's proposal to require all meters within embedded networks to have NMIs and to be registered in MSATS has merit and will simplify the transfer of embedded network customers to the retail market, reducing unnecessary meter churn in these circumstances. However, it is likely to increase installation costs for some brownfield embedded networks and risks further skewing the playing field against embedded networks. We note that under current arrangements, when an embedded network is retrofitted to a building, embedded network service providers may be required to remove and replace existing (NMI) meters throughout a building, even where (as in Victoria) there may be no technical necessity to do so. We would urge the Commission to further reduce unnecessary meter churn by requiring existing meter owners to transfer meters to embedded network service providers (where it is technically feasible to do so, and at a reasonable cost) when an embedded network is established.

Stakeholder Questions

- The exemption process has flexibility which has been utilised in new, innovative business models. The Commission has proposed moving some of this flexibility to the retailer authorisation process. Will the proposed approach allow an appropriate level of flexibility? What elements should be flexible in the authorisation process?

In the absence of an exemption framework, increased flexibility in the retailer authorisation process is essential. Although all consumers require protections, it is inappropriate to apply the same responsibilities and constraints to the diverse range of embedded network operators, as has been recognised historically by the exemption framework. The entry criteria for organisational and technical capacity and financial resources (NRL Section 89) should be proportionate to the scale of embedded network and retail operation. The financial and administrative financial burden of retailer obligations should be considered relative to the financial and administrative capacity of applicants to ensure that the process does not unduly penalise smaller retailers and new market entrants.

- The Commission has not recommended, at this stage, that consumer benefits be demonstrated to gain approval to establish an embedded network. This is on the basis that the regulatory framework is designed to promote efficient decisions. Do stakeholders agree?

When discussing consumer benefits of embedded networks or any other mode of energy supply, it is important to consider a wider range of benefits beyond energy pricing. As well as lower energy bills through bulk purchase of electricity, potential financial benefits may include smaller strata charges or reduced rent, or long-term hedging against price increases. Indeed, as the capital costs of embedded networks cannot be recovered through energy charges, apartment owners and residents, for example, already need to consider these broader financial impacts in assessing the costs and benefits of different business models. Groups of consumers may also elect to establish an embedded network for non-financial reasons: to access renewable energy, reduce their carbon emissions or to gain control of their energy supply. Giving consumers genuine choices about their energy purchasing must include the option to consider the totality of costs and benefits of alternative supply arrangements.

Given customers' guaranteed access to the retail market, demonstration of reduced energy bills may not be necessary, and providing evidence of the less transparent benefits may be difficult, so requiring such demonstration as a pre-requisite for establishing an embedded network could create additional barriers to authorisation for little customer benefit.

However, in exercising the proposed flexibility in the retail authorisation process, it is useful to identify where embedded networks are established in the interests of customers. Demonstration of the provision of consumer benefits could in these cases be used to justify less onerous obligations or responsibilities, possibly including exemption.

- Under the proposed framework most new embedded networks involving permanent residential or commercial tenants would require the embedded network service provider to be registered and the on-seller to be an authorised retailer, while exemptions would be available in limited situations such as temporary supply and temporary accommodation. There may also be merit in allowing exemptions for small embedded networks such as caravan parks with a small number of permanent residents. Would a flexible authorisation process be able to have similar benefits and regulatory burdens as the exemption process? What types of embedded networks should continue to be able to obtain exemptions?

Existing exempt retailers include residential Owners Corporations and co-operatives and there is increasing interest amongst residents of strata communities and apartments in the use of embedded networks to develop shared energy resources. As well as energy selling being a minor part of their activity, these existing and potential embedded networks are characterised by their shared ownership and by having the primary aim of providing consumer benefits to their customers.

Removing these embedded networks – owned and operated by organisations that (as noted in the Draft Report) are unlikely to become authorised retailers - from the exemption framework reduces the choices available to a growing group of consumers and risks penalising these groups for the misdemeanours of other, less customer-focused organisations. We therefore recommend the Commission introduces a class of exemption that allows continued exemptions from embedded network service provider registration and retail authorisation for organisations wholly or partially owned by their customers and whose purpose includes providing benefits to those customers.