21st February 2023

Battery Storage and Grid Integration Program
The Australian National University
ACT, 2601, Australia
w: https://bsgip.com

To Whom It May Concern,

RE: Response to Consultation on *Unlocking CER benefits through flexible trading*

Thank you for the opportunity to contribute to the AEMC's rule-change consultation on *Unlocking CER benefits through flexible trading*. This is an important and central issue as Australia transitions towards a renewable and distributed energy system.

Driven by the need to rapidly achieve economy-wide decarbonisation, we are currently experiencing a global energy transition. The Battery Storage and Grid Integration Program (BSGIP) is responding to the opportunities and challenges created by this transition, designing and implementing the building blocks of a decarbonised and resilient energy system for the benefit of all energy users. Through our work we are creating and implementing new software, systems, and business models that will ensure we are able to achieve our decarbonisation goals.

Key to successfully achieving a global energy transition is ensuring significant consumer participation through the uptake of distributed consumer energy resources (CER), including rooftop solar PV, household battery storage and electric vehicles (EVs). This uptake is currently obstructed by the cost and complexity of acquiring and benefitting from CER. BSGIP is working to address this by:

1) developing and advocating for simplified system and market participation models for CER; and
2) providing simple tools to calculate the benefits of CER uptake for households and communities.

The key is to unlock the ability for consumers to afford and benefit from CER and accelerate decarbonisation without requiring them to be experts in the complex energy system. The proposed rule-change has the potential to achieve this; multi-trader arrangements would enable market opportunities to be tailored to the individual needs and desires of any given household. However, we believe that key aspects of the proposed rule change must be clearly supported to enable the best outcomes for householders.

In this submission we propose leveraging the private metering arrangements (PMAs) enabled by flexible trading to promote simple ways for consumers to engage with energy retailers and other traders. This can be achieved through dedicated metering that supports the individual needs of those consumers and the specific CER they own, an approach we describe as *meter unbundling*.

Simplicity is key

Recent policy developments have sought to unlock the capabilities of CER to provide significant value and benefits to householders. However, the frustration and difficulty that Australian energy consumers experience in engaging with the energy system is well-documented, including in the Australian Energy Regulator's *Towards Energy Equity* strategy[1].

This consultation seeks to identify additional mechanisms that allow householders to adopt and benefit from CER. However, there are risks that by increasing the complexity of deploying and operating CER, householders may be less able to understand and realise these benefits. This may ultimately have the effect of reducing engagement and desire for householders to acquire and deploy CER, an outcome that would jeopardise national efforts to achieve economy wide decarbonisation.

Many examples provided in the consultation paper and in AEMO's original rule-change proposal describe a two-tier metering arrangement, where all controllable CER is on a single circuit with a dedicated sub-meter. Such an approach has the potential to limit how householders engage with a range of retailers and other traders that can meet their needs and expectations based on the CER assets they wish to deploy and benefit from.

This two-tiered flexible trading approach also requires householders to understand the physical interconnection of their energy supply and how this physical design interacts with the broader market operation. We are concerned that this complexity risks causing substantial confusion, thus making it harder (and less likely) for householders to take up CER and benefit from the flexible connection options available to them.

Our response to this consultation is thus centred on ensuring the development of effective connection and participation options for CER that allow consumers to engage with these devices simply and easily without compromising the flexibility that is at the heart of this rule-change and related recent policy developments.

Meter unbundling

The options presented in both the consultation paper and rule-change proposal include the ability for CER to be individually metered; that is, for a householder's electricity meter to be *unbundled* down to the individual CER device (and indeed the meters themselves may be physically located within the CER being monitored). On the face of it this approach could appear to be more complex than contemporary metering, as it results in numerous meters within a premises and potentially requiring a consumer to engage with numerous retailers or traders.

However, if implemented effectively, this approach could be much simpler from the consumer's perspective. For example let's examine the options for a homeowner who purchases a new EV along with a smart EV charger. In the current connection and participation scenario, the consumer would have no choice but to engage with their existing retailer for this new asset or engage with a new retailer for the whole house. Recent examples of tariffs targeting EV-charging (with and without off-peak control) that include up to 14 different usage charges and periods[2] are an illustration of the complexity this can create.

Using the proposed meter unbundling approach, the homeowner could instead engage with a retailer that specialises in EV charging for the EV without needing to change or disrupt their current retail offering. Such a dedicated EV charging retailer or trader could provide a tariff optimised for EV charging and optimise the charging behaviour of the EV consistent with the tariff.

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[1] https://www.aer.gov.au/retail-markets/guidelines-reviews/towards-energy-equity-a-strategy-for-an-inclusive-energy-market

[2] https://www.powershop.com.au/app/rates/aer/electricity/residential/ev/sapn/combined.pdf?v=1.1.0

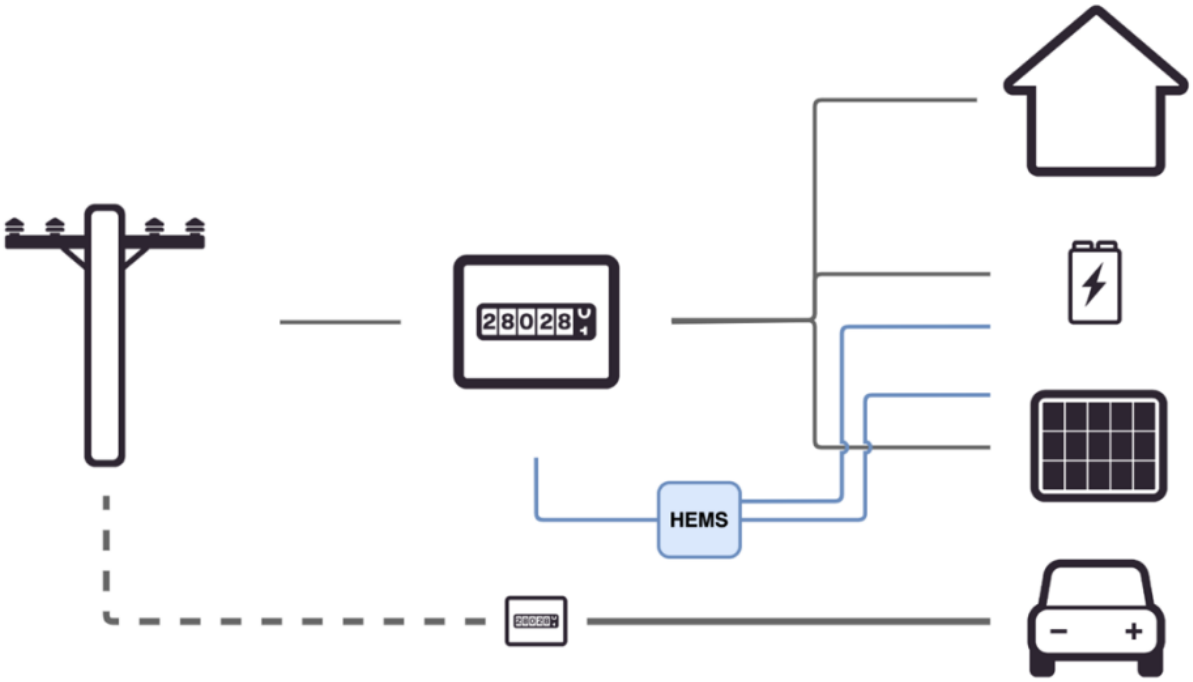

Figure 1 - How meter unbundling could support beneficial consumer outcomes

For the consumer this could be a simple way of keeping their vehicle charged cost effectively (i.e. Fuel-as-a-Service), without needing to navigate the complexity of acquiring a compatible home energy management system and a new retailer and retail contract. If that same householder then elects to buy solar and a residential battery, they could separately contract with an aggregator who focuses on solar-soaking combined with ancillary services, providing financial benefits to the consumer and to the broader energy system without affecting their EV management and operation.

It is important to note that this meter unbundling approach builds on existing customer comfort and familiarity with equivalent mechanisms that have underpinned controlled-load hot water and related off-peak tariffs, and historical approaches for gross-metered solar.

The advantages of meter unbundling

The meter unbundling approach outlined above provides many opportunities to improve consumer engagement and distribute the economic value of CER to all householders. Crucially meter unbundling also provides opportunities to address other challenges that householders, OEMs and system and network operators experience when CER assets are acquired and deployed. These advantages are briefly outlined below:

- Contemporary methods of managing CER often utilise walled-garden approaches that reduce interoperability and make it difficult (or impossible) for technology providers to orchestrate disparate CER to the consumer's benefit. By separately metering each CER asset (i.e. meter unbundling), a portion of CER can be coordinated by one trader whilst allowing other CER assets to be separately coordinated. Our work to date has demonstrated that this may be the most cost effective and socially acceptable way to maximise householder value from multiple CER assets deployed at a household.
- Effectively implementing meter unbundling also has the potential to simplify how CER assets contribute to energy, ancillary and network services markets. CER assets managed and operated in a meter unbundled configuration will not be impacted by discretionary household load, thus making it easier to forecast their behaviour and market participation which will directly contribute to enhanced energy reliability and security.

- Developing meter unbundling models will ignite market development of simple, tailored retail offerings that make home electrification easy (particularly for EV charging). We anticipate that this increase in retail offerings has the potential to drive down the costs of energy for householders through effective retail competition that currently does not exist.
- Meter unbundling approaches could offer substantial benefits for shared-living and strata arrangements – supporting individual apartment or strata owners and renters to engage with their own preferred trader for their specific CER (EV supply equipment being a clear example) without impacting other occupants. Meter unbundling approaches also have the potential to reduce the technical complexity associated with EV charging on dedicated car-park circuits in apartment buildings.

In the context of these broad benefits, we strongly recommend that the Commission do not evaluate the costs and benefits of this meter unbundling approach solely through an economic efficiency lens. Instead, we strongly encourage the Commission to undertake a thorough socio-techno-economic analysis to fully capture the benefits and opportunities that meter unbundling may unlock.

Conclusion

There is enormous potential for Australia's world-leading fleet of CER to contribute to the decarbonisation and efficient operation of the electricity system. However, key to encouraging the uptake of CER, which is funded by householders, is simplifying the process by which householders can acquire and benefit from CER.

We believe that the aspects of the *Flexible Trading* rule-change which enable meter unbundling will go a long way towards realising this outcome by:

- Making it easier for householders to understand the costs and benefits of acquiring CER assets; and
- Increasing the number and variety of retailers and retail offerings that are available to householders who acquire CER assets.

If you would like to discuss any of our comments in this submission, please feel free to get in touch.

Submission authors

Tim Moore – timothy.moore1@anu.edu.au (Corresponding Author)
Alix Ziebell
Josh Vote
Dr Michael Thomas
Professor Lachlan Blackhall