Jessica Curtis

Australian Energy Market Commission

Submission made online at www.aemc.gov.au

16 February 2023

Dear Jessica,

Subject: ERC0346 Unlocking CER benefits through flexible trading consultation paper

SA Power Networks welcomes the opportunity to provide feedback in response to the above consultation paper regarding AEMO's flexible trading rule change proposal.

We support innovation and customer choice and we share the vision of a future where electricity customers can easily access a broad range of retail products and other energy services that help them to create the most value from their flexible resources. We do not, however, support the proposed rule change. This is because:

1. The proposed change is not customer-led
2. We consider that the problems that the rule change seeks to address are overstated
3. The approach proposed has serious flaws that cut across the efficiency of other market mechanisms, and would be likely to drive significant inefficient cost
4. In our view the primary objectives of the proposed change could be achieved more simply and at lower cost to customers and industry within current frameworks.

We consider that one specific aspect – the proposed minor energy flow metering arrangement – has some merit and warrants further consideration. We recommend, therefore, that the AEMC:

- Does not make the rule proposed
- Considers making a more preferable rule specifically to support minor energy flow metering.

In our view any proposal to introduce flexible trading arrangements in the manner contemplated in this rule change request would need to be supported by a full cost/benefit analysis. In the meantime, this concept could potentially be explored through small-scale trials.

These points are expanded further below.

1. The proposed change is not customer-led

The key premise of the rule change is that it is necessary because customers want to be able to establish separate retail contracts for different parts of their household load – to contract with one retailer for their regular supply, another for their solar feed-in, a third who offers a home EV charger with bundled electricity, and so on.

At no point in our engagement with our customers, or with customer representatives and other stakeholders through the ESB Post-2025 market review, have we observed any evidence that electricity customers want this level of complexity and choice at this time.

On the other hand, there is clear evidence that customers are struggling to take advantage of the choices they already have in the competitive retail market and find it hard to compare retail plans and change retailers. A 2021 study by St Vincent de Paul Society found that retailers were offering a proliferation of products with a baffling diversity of special offers, inclusions and promotions, making them very hard to compare[1]. The report found that retail switching rates were declining in all states other than the ACT, and that fewer than 1% of customers were with the retailers offering the best market offers[2].

In early 2022, as we began work on our 2025-2030 regulatory proposal, we ran workshops around South Australia with customer groups to explore what was important to electricity customers. Time and again, customers from all demographics cited the increasing complexity of the electricity market as a key concern. Many customers already feel bewildered as they grapple with choices around solar, home batteries, electric vehicles and tariffs. In our experience, customers are seeking simplicity, not more choice and complexity.

Rather than being customer-led, it appears that the rule change is motivated more by market ideology, to promote a long-term goal to create secondary settlement points so that flexible customer resources can be brought into central dispatch, via aggregators, with a view to increasing the efficiency of the future market. There are, however, many unknowns around the materiality of future market benefits compared to simpler approaches and around customers' ability and appetite to engage with such flexible trading arrangements. It may be that any such complex arrangements would only ever suit commercial and industrial customers, where the size and nature of their flexible resources may warrant a more active role in central dispatch and price-setting than small-customer CER[3].

Absent any clear evidence of customer 'pull' for these kinds of arrangements at the present time, we would recommend that trials (using regulatory sandboxing as required, and ideally focusing initially on commercial and industrial customers) could be undertaken to build a better understanding of the costs, benefits and customer impacts of the proposed approach before considering proceeding with a rule change.

In the meantime, we should seek opportunities to reduce complexity and improve customers' ability to engage with the choices they already have.

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[1] St Vincent de Paul Society and Alviss Consulting, *National Energy Market – Lower prices, more offers: Are consumers reaping the rewards?*, November 2021, accessed at https://www.vinnies.org.au/icms_docs/329296_National_Energy_Market_-_Lower_prices_more_offers_Are_consumers_reaping_the_rewards.pdf

[2] Ibid

[3] Noting that previous work by the ESB in this area found that in the NEM around 66% of the load arises from only 0.8% of large customers.

2. The problems that the rule change seeks to address appear to be overstated

The rule change suggests that these reforms are necessary to enable customers to unlock value from their flexible resources by outsourcing control to third-party traders who can activate them to participate in markets like wholesale energy, FCAS and network support.

We note that there is a growing number of products and services available to customers today, operating within the current market rules, that reward customers for activating their CER or flexible loads, either under their own control or by outsourcing control to a third party. Examples include:

- VPP schemes that engage customers' home batteries to trade in wholesale and FCAS markets. There are nine separate VPPs currently operating in South Australia alone, with more than 10,000 customers enrolled
- Innovative retailers offering wholesale-price-exposed tariffs for small customers, e.g. Amber Electric[4], whose product includes a bundled energy management service to optimise the customers' flexible resources behind the meter
- AGL's Solar Grid Savers product that rewards customers for allowing AGL to remotely control their solar inverter to reduce output at times of negative wholesale price in SA
- New retail tariffs such as those based on SA Power Networks' 'solar sponge' time-of-use tariff[5] that reward customers for the network benefits of shifting flexible loads into the daytime
- SA Power Networks' move from the traditional overnight-only requirement for electric hot water to a 24-hour controlled load window with a time-of-use tariff. This change, made in 2020, has made it possible for energy retailers in South Australia to shift customers' flexible hot water loads from overnight to the lower-cost daytime period, capturing the benefits of both a low network tariff and low (or negative) wholesale market prices while helping to reduce minimum system load issues in SA
- Innovative load aggregation schemes like pool-pump aggregator Pooled Energy[6]
- SA Power Networks' 'Diversify' tariff, which rewards customers for enrolling smart EV chargers to receive a DOE in order to address local demand peaks (trial commencing in 2023)
- Smart load products like Rheem's PowerStore smart hot water systems, which can also be remotely controlled as part of a VPP.

While the market for these kinds of 'new energy' services is still immature and there are certainly barriers around the cost and availability of technology, limited product interoperability, low penetration of smart meters and so on, we have not seen any evidence that the single retailer arrangement in the NEM is holding back innovation or impeding customers' ability to access products that reward them for engaging their CER in the market.

3. The approach proposed has serious flaws

The proposed 'FTM2' model has serious flaws, many of which are described in detail in the AEMC's consultation paper. We are particularly concerned that the proposed model would increase network

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[4] See https://www.amberelectric.com.au

[5] See https://www.sapowernetworks.com.au/your-power/billing/pricing-tariffs/

[6] See https://pooledenergy.com.au

costs for customers. It would lead to less efficient use of the shared network by undermining the effectiveness of both cost-reflective network pricing and 'Dynamic Operating Envelopes'. These and other key concerns are summarised below:

- The model intends that FRMP1 is the single point of interface to the DNSP. FRMP1 pays the network tariff for the whole site, on the total net energy flows at the connection point, and receives any Dynamic Operating Envelope (DOE) issued by the DNSP under the customer's connection agreement
- This arrangement would mean that FRMP1 is the only one exposed to cost-reflective network pricing at the connection point. In AEMO's example, however, the only portion of the customer's load that FRMP1 could influence via its retail tariff structure would be the portion that is inflexible and hence, by definition, not price-responsive – all the customer's flexible load has been shifted off to the sub-FRMPs. The rule change would create a barrier that prevents network price signals from flowing through to the portion of the customer's load that's able to respond to them. This would seem to completely subvert the intention of cost-reflective network pricing and would likely lead to inefficient use of the shared network and higher network costs over time.
- The above issue is a specific consequence of a more general problem with the approach: the way for a customer to optimise their energy use is to coordinate all flexible resources at their site to work together, and with visibility of the inflexible portion of their load. If a customer gives up control of their EV charger to one retailer, their battery to another and their solar inverter to a third, the opportunity to optimise is lost because the individual retailers have no visibility of the other resources on site and how they are behaving. In this case, customers' resources could end up 'fighting' one another rather than working in harmony. By far the biggest opportunity for most CER customers is in shifting loads to optimise self-consumption of their own solar energy, and separating different loads under different, independent, control schemes prevents this.
- This model also causes severe problems for flexible exports and other flexible connection arrangements because no single party can control the aggregate of all flexible and inflexible loads and generators at the site to ensure that the site, as a whole, conforms to a DOE.
- There is consideration that, as an alternative, FRMP1 could somehow disaggregate the network charge and DOE and share them among the sub-FRMPs. AEMO discounts these options on the reasonable basis that they have numerous technical, practical and commercial problems, noting that the various FRMPs are competitors. It's likely that the best that could be achieved under these kinds of approaches would be an inefficient pro-rata allocation.
- The design assumes that there will be one or more physical change-over switches, presumably in the customer's meter box, which the customer could use to shift their loads from one provider's circuit to another. We understand that this is to achieve backup power in the event of an outage (if their battery is normally isolated from other loads because it's on its own retail arrangement) or so that the customer can save money by moving resources between providers to take advantage of the lowest prices offered at any time. As is recognised in the AEMC's consultation paper, it is not clear how any service provider could structure a commercial product based on access to and control of the customer's CER if the customer could 'game' the system by physically opting their devices in and out of the scheme.
- There are also significant practical and safety implications associated with relying on physical wiring and switches to separate different devices managed by the various FRMPs, not least the need to re-wire if the customer wants to add a new provider, or change their mix of service providers. A property has a lifecycle that extends beyond a single customer's occupancy; any complex wiring arrangements established by one customer to support their

preferred mix of service providers would likely have to be modified by the next customer moving in.

- FRMP1 in this model is the only one with the power to remotely disconnect and reconnect supply to the premises using the main contactor in their smart meter – also disconnecting all other FRMPs from access to the customer's CER.
- Beyond these issues, there would be multiple knock-on impacts on existing relationships, obligations, market procedures and IT systems, e.g. for NMI allocation, life support customers, network connection agreements, meter replacements (including adding even more complexity to the accelerated smart meter rollout being proposed in the AEMC's review of metering) and so on. It is not clear that the cost to industry and market bodies of these changes has been assessed, but given it is likely to be significant, any such rule change would need to be supported by a thorough cost/benefit analysis.

4. The primary objectives of the proposed rule change could probably be achieved more simply and at lower cost

We understand there are two key objectives of the rule change:

- Create separate metering and settlement points for customers' flexible resources to facilitate trading them in wholesale energy and other markets (e.g. without the complexities of baselining or 'backing out' the regular variation in the customers' non-discretionary loads)
- Create the opportunity for innovative service providers to offer customers 'bundled' offers like a smart EV charger that comes with its own discount electricity plan

It seems that the key feature that these require is the ability to sub-meter individual loads in the home, including potentially using low-cost meters embedded in the devices themselves. There may be potential for a simpler rule change that would enable this but without introducing multiple retail relationships. The AEMC's consultation paper notes that this is the direction that was taken in California[7] and in the UK[8].

In this case a single retailer could offer a package that included a separate energy rate for the customer's EV charger and an optional VPP add-on for their battery. These could be the retailer's own products, or could be assembled from services provided by third party aggregators, but bundled into a single retail offer. The customer could then choose the retailer who provided the best package for their particular combination of resources. This kind of arrangement would be a natural extension of the dual-element metering used today by retailers to offer different retail tariffs for off-peak controlled load compared to regular household load. Enabling sub-metering of individual loads for settlement, but in the context of a single retail relationship for the entire premises, would appear to enable the key benefits being sought without creating the numerous problems listed above.

In this context, we consider that the part of the rule change proposal concerned with minor energy flow metering installations has merit, and we also recognise that this would have benefits for the 'street furniture' applications identified. The benefits would be greatest if it were possible to take advantage of the metering capabilities already built into products like smart solar inverters, smart streetlights and smart EV chargers. A rule change concerned only with this aspect would warrant further consideration.

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[7] Box 1, page 17 in the AEMC's consultation paper

[8] Box 3, page 27 in the AEMC's consultation paper

We look forward to continuing to engage constructively with the AEMC, AEMO and other stakeholders to support efforts to transition to a more customer-centric electricity system. In the meantime, If the AEMC has any questions on any aspect of our response, please contact Bryn Williams, Network Strategy Manager, at bryn.williams@sapowernetworks.com.au.

Mark Vincent

General Manager Strategy and Transformation