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Total Environment Centre AER Issues Paper: NSW electricity distribution determinations

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TEC's National Electricity Market advocacy

TEC has been involved in National Electricity Market (NEM) advocacy for 14 years, arguing above all for greater utilisation of energy conservation and efficiency, demand management and decentralised generation, storage and trading to meet Australia's electricity needs. By reforming the NEM we are working to contribute to climate change mitigation and improve other environmental outcomes of Australia's energy sector, while also constraining retail prices and improving the economic efficiency of the NEM—all in the long term interest of consumers, pursuant to the National Electricity Objective (NEO).

Introduction

TEC is funded by Energy Consumers Australia to advocate for the equitable decarbonisation of the NEM. By 'equitable decarbonisation' we mean in particular that consumers (or prosumers) with distributed energy resources (DER—solar, batteries, EVs, smart meters, etc) are on the one hand treated fairly (not discriminated against and receive appropriate payments for the services they provide); and on the other, that non-DER consumers do not pay a disproportionate amount of ongoing network revenues and for new infrastructure investments required as a result of high bidirectional flows.

We work across jurisdictions on tariff structure statements (TSSs) to further the rollout and uptake of more cost reflective network tariffs (CRNT). This submission therefore deals exclusively with the TSSs of the three NSW distribution networks; and more particularly with the design of their demand tariffs.

TEC's overall approach to this issue is detailed in the attached appendix. TEC is a strong supporter of the move to more CRNT in general, and well designed demand or capacity tariffs in particular. Please note:

- For the sake of brevity we have omitted consideration of the effectiveness of networks' stakeholder engagement processes or the high level principles and objectives in their TSSs.
- As most DER consumers are currently households rather than businesses, our submission is confined to residential tariffs.
- We are more interested in long term progress towards fully cost reflective demand tariffs than in transitional tariffs.
- This submission focuses on where improvements can be made rather than commenting on every aspect of each TSS.

Equitable decarbonisation

In short, equitable decarbonisation suggests the following responses to the three NSW network TSSs:

1. CRNT should be introduced as soon as possible in order to more equitably apportion the cost of new infrastructure investment to cater for peak demand. This may disadvantage some solar customers without batteries or the ability to shift load, but would still be equitable.
2. Demand tariffs should be designed to facilitate load shifting (eg, by signalling peak events in real time and by having relatively short peak windows).
3. New DER (and other new) consumers with smart meters should be mandatorily assigned to demand tariffs (since the latter would allow them to shift the burden of future costs back onto non-DER consumers). Other DER and non-DER consumers with smart meters should be transitioned to demand tariffs by the end of TSS2 (2024).
4. Networks should avoid steep increases in fixed charges, as these distort the LRMC price signal, and high fixed charges discourage energy conservation.

5. Networks should explore innovative tariffs to facilitate the transition to a high DER, low carbon energy system, including daytime solar trough tariffs as a form of controlled load where bidirectional flows are high, and positive tariffs (ie, payments) for battery exports as a demand management or network support tool in constrained areas of the grid.
6. Networks should consider the potential of DER as demand management tools (eg, by offering incentives to face new solar panels west).

General observations

1. All three networks have made incremental moves towards more *CRNT* in line with their obligations under S.6.18 of the NER. However, in our view none has moved far enough, considering this is the second round of TSSs. Of the three, Endeavour has made the most substantial progress. At the other end of the spectrum, Ausgrid has been recalcitrant in regard to CRNT, showing little substantial progress over its previous TSS. This overall lack of progress relative to networks in other jurisdictions may be a consequence of past overinvestment in NSW networks, resulting in low motivation to reduce peak demand. However, aside from the fact that there are pockets of demand growth in each network, CRNT are intended to send price signals that would prevent future demand spikes. These signals should be provided by network-wide LRMC prices calculated over time horizons greater than 10 years.
2. Unlike the Victorian and Queensland networks, those in NSW are not working towards introducing *consistent* tariffs. We regard this as unacceptable, given the potential benefits to consumers and retailers of consistency and the ability of broadly similar CRNT to be tailored to locational needs.
3. None of the three networks appears to display in their TSSs a *long term tariff-related strategy* to deal with the kind of future envisaged in the CSIRO/ENA Network Transformation Roadmap. That is, none is asking and trying to answer the question, What tariff strategy should we work towards to respond to a high-DER, low carbon future grid—and to reduce the chances of large-scale grid defection and disconnection?
4. TEC regards *maximum monthly demand (MMD) tariffs* as a relatively lazy option, as they are really just TOU tariffs with a demand component. They are suitable only for transitional purposes, and we encourage networks and the AER to at least trial more innovative CRNT over the 2019-24 period—in Endeavour's case, potentially in greenfields growth areas.
5. All three networks propose to increase *fixed charges*—substantially in the case of Ausgrid, through to a minor increase in the case of Essential. As argued in the appendix and summarised above, TEC does not support this approach as it is regressive and mitigates against consumers control of bills as well as energy conservation.
6. Coming off a low base of direct *consumer engagement* in TSS1, all three networks significantly ramped up their engagement strategies for TSS2. This is commendable. All three networks have also done a good job of explaining their tariff strategies in clear, simple language. However, there has been tendency to use consumers' preferences for simple (ie, flat rather than demand) tariffs as a justification for moving slowly towards the latter. We would argue firstly that these engagement processes provided only limited and complex maximum monthly demand (MMD) tariffs for consumer feedback, and also that network tariffs should be designed primarily with retailers rather than consumers in mind.
7. Customer *bill impact analysis* was generally inadequate, failing to specify potential impacts by load profile, household income, DER status or the potential impact of behavioural responses such as load shifting.
8. All networks should take steps to *inform DER owners* and others mandatorily assigned to demand tariffs the reasons for the move away from flat tariffs and how they can benefit by adapting.
9. The effectiveness of TOU and demand tariffs depends in part upon a significant price difference between peak and off-peak rates, to incentivise load-shifting and -shedding. The existence of *shoulder rates* dilutes

this price signal—especially when the price difference between peak and shoulder is perceived by consumers to be minor (say, less than one-third).

10. In view of the customer impact principle in the NER, we consider it appropriate (but not essential) for the *transition to full cost reflectivity* to be on a pro-rata basis from 2019 to 2024 (ie, 20% in year 1 to 100% in year 5).

11. We are in substantial agreement with *PIAC's recommendations* with regard to the following issues:

- Speed of tariff reform.
- Fixed charge increases.
- Assignment of customs to cost reflective tariffs.
- Consistency of tariffs between networks.
- Mid-term review of the TSS.

Additional comments

Endeavour Energy

The overall move from time of use energy (TOUE) to time of use demand (TOUD) tariffs is welcome, and both the charging parameters (peak period, days of week and seasonality) and customer assignment strategy are appropriate. Endeavour has gone to great lengths to incorporate stakeholder feedback in designing this tariff, particularly around the charging parameters—eg, the justification for the peak charging window of 4-8pm on weekdays and removal of the 3-part TOU structure from demand tariffs.

On the other hand, whether they are based on one or multiple days' peaks per month, MMD demand tariffs are fundamentally deficient in two critical respects:

- Being complex and retrospective, they are difficult for consumers to understand and respond to, and are therefore unlikely to be enthusiastically adopted by retailers or consumers.[1]
- They show a relatively poor correlation with either zone substation or system-wide network peak (ie, coincident) demand.

This criticism is not specific to Endeavour, but reinforces our point that MMD tariffs should only be transitional.

Further: Endeavour has provided a useful analysis of the projected bill impacts of its Residential Transitional Demand tariff, but apparently not of its Residential Demand tariff.

Essential Energy

It is proposed that consumers with DER and smart meters should be assigned to a TOUD (time of use demand) tariff on an opt-out basis, while non-DER consumers can opt in to this tariff. This is inherently discriminatory. Given that demand tariffs are intended to signal the future cost of meeting peak demand, we see no reason why non-DER consumers should not also be assigned to this tariff on an opt-out basis (if not mandatorily).

The rationale for including a weekday morning peak period for households with type 5 (interval) meters but not for households with type 4 (smart) meters is unclear.

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[1] See, eg, Mountain, B. R. 2018, Customers' rejection of electricity tariffs with demand charges: Lessons from Australia, in *Consumers, prosumers, prosumagers: How innovation in energy services will lead to stratification of consumers and disrupt traditional utility business paradigm*. Sioshansi, F. Ed. Academic Press. Forthcoming.

Given there are substations in the Essential area with over 30 per cent of households having PV, there may be legitimate concerns with high bidirectional and potential reverse flows. Should this be the case, we would expect that it would be in Essential's interest to at least trial a solar sponge tariff.

We disagree with the renaming of the controlled load tariffs as Energy Saver. This gives the impression that consumers with these tariffs are actually saving energy, whereas in reality they are saving money at the expense at present of higher than average carbon emissions from overnight generation. This tariff name is therefore misleading.

While the proposed increase in fixed charges ($5 pa) is minor compared with Ausgrid's, Essential's fixed charges are already amongst the highest in the NEM, and we would prefer that sunk costs be recovered through energy and demand charges as well. However, the Indicative NUOS Pricing Schedule shows fixed charges for residential consumers rising from $284 in 2019 to $331 in 2024—an increase of nearly $10 pa. This appears to contradict earlier claims of a $5 pa increase.

Households with high consumption will, relatively speaking, be substantially better off on the Small Residential-Opt in Demand tariff than those with low consumption. We assume this is because Essential's already very high fixed charges constitute a smaller percentage of the total bill for large users. This reinforces our point about the regressive nature of fixed charges.

Ausgrid

As Ausgrid has not designed a residential demand tariff, let alone assigned customers to it, in its draft TSS there is not a lot to say except to challenge its justification for (not) doing so. Ausgrid's TSS accepts that

> …better signalling to customers of the cost of using our network at peak times (such as hot summer afternoons when air conditioning load is at its highest) will encourage more efficient use of our network…
>
> On the other hand, customers should be encouraged to use our network outside of peak times, when the cost of providing network services is very low.

This sounds like a rolled gold justification for introducing a demand tariff. The TSS then accepts that tariffs can contribute to greater affordability in two ways:

- Empower customers to actively manage their contribution to peak demand in order to keep costs low.
- Encourage customers to use our network when the cost of doing so is very low.

The third objective, sustainable network services, also justifies the introduction of a demand tariff, since it would simultaneously tackle the issue of equity between DER versus non-DER customers. And yet the TSS goes on to invoke the rhetoric of 'uncertainty and potential adverse effects on our network costs' (which we do not accept, given the uncertainty caused by Ausgrid's own approach, and the absence of adverse impacts on network costs in the context of a revenue cap) to conclude that instead of designing and implementing a demand tariff to address these very issues it would merely

> …launch a Pricing Working Group and research program – framed by stakeholder feedback – to address potential pricing reforms and to make sure that, where appropriate, we are well-placed to fast-track their implementation.

We do not regard this solution as adequate or compliant with S.6.18.5, Pricing Principles, of the Rules, particularly in regard to basing each tariff on the LRMC of providing services. For the AER to approve this approach, it would need to be satisfied that Ausgrid, alone of all the networks in the NEM, is in such a unique position that a research program is needed before even the trial of a demand tariff can be included in its TSS.

We are aware of no evidence to substantiate this claim. In our view, not only has this case not been made; on the contrary, Ausgrid's own proposed approach to tariff reform supports the introduction of such a tariff from 2019. The AER should be especially harsh in its judgement of Ausgrid's Orwellian claims that its proposed approach

- Enables a fast-tracked transition to demand pricing, pending the outcome of our research program.
- Allows us to expedite our transition to cost reflective pricing.

Finally, we take issue with the statement that 'opt-in demand pricing is not an effective way to avoid future network costs.' We agree, because an opt-in option means that only those likely to benefit financially are likely to sign up, leaving other customers to make up for the net revenue deficit. As the ACCC, the Consumer Action Law Centre and other consumer advocates have argued, the mandatory assignment of residential consumers with smart meters to demand tariffs is the fairest outcome for all. Ergo, '*mandatory* demand pricing *is* an effective way to avoid future network costs.'

Responses to the AER's questions

Do stakeholders support moving to cost reflective tariffs?

Technically, the 2014 CRNT rule change means that the AER does not have discretion in regard to whether or not to implement them, suggesting that this question is redundant. However, we understand the question to refer to the issue of how far along the road to tariff reform the NSW networks should be expected to move in the 2019-24 TSSs.

As a contributor to the CCP's Pricing Directions paper, and consistent with the attached TEC briefing note and the above, we acknowledge that all of the NSW networks have made limited progress in the TSS2 process. However, if the assumption is that the transition to fully CRNT is a decade-long process that started in 2017, and that TSS2 occurs the 5 year period to 2024, it is clear that none of the networks is currently at least halfway along this road—and Ausgrid has hardly begun.

Should distributors have more consistent tariff designs and assignment policies?

Yes. As argued in the attached briefing note, residential consumers, business customers and energy retailers all benefit from avoiding the confusion of multiple tariff structures within the same jurisdiction. If the Victorian and Queensland networks can agree on common tariffs, we see no reason why the NSW networks cannot do likewise. Some substations may peak in winter and at different times of the day to those with summer peaks, but dynamic CRNT can vary by location as well as time of day.

in our view there should be a single demand tariff offer by all three NSW networks, with the following parameters:

- MMD based on a customer's single maximum demand in the previous month.
- Applicable in the period 4-8pm on weekdays for 4 months per year over summer (and in inland locations, over winter as well, or the entire year).
- Assigned on a preferably mandatory basis for all new and upgraded connections.

Endeavour's proposed demand tariff is the closest to this model.

The balance between certainty and flexibility in the NSW TSS proposals

We understand this question to be a polite way of asking whether Ausgrid should be able to have a non-specific demand tariff in its 2019-2024 TSS with no customers assigned. Our answer is no. There is no need for Ausgrid, alone of all the networks in the NEM, to undertake a lengthy research program before introducing a residential demand tariff. Its reluctance to do so appears to be driven less by concern for its customers or fealty to the Rules than a reflection of past network gold plating, resulting in an absence of network constraints in the next regulatory period.

Should tariff assignment policies reflect expected demand growth?

We understand this question to relate above all to the issue of whether new customers should be able to opt out of demand tariffs, especially in growth areas where there are network constraints. As argued in the attached briefing note, in our view the answer is *no*. The effectiveness of CRNT depends on their widespread adoption.

Recommendations

1. The AER should approve the TSSs for Endeavour and Essential Energy on condition that they are amended to include (perhaps locational) trials of more innovative CRNT (demand, capacity or solar sponge) tariffs during the 2019-24 regulatory period; and subject to #3 below.
2. The AER should *not* approve the TSS for Ausgrid unless it is substantially altered to include a definite commitment to introduce a demand tariff with specified design parameters and customers assigned from the start of TSS2, ie, July 2019.
3. All three networks should be required to adopt a consistent MMD tariff for 2019-24, preferably based on Endeavour's demand tariff.
4. All three networks should be required to develop a long term tariff strategy to respond to a high DER future.

For more information please contact Mark Byrne, Energy Market Advocate, markb@tec.org.au.

Yours sincerely,

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